The Iron A

A Review of the Hardware, Iron and Metal Trades.

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The screw making machine which we illustrate is intended to manufacture finished screws from solid rods or blanks. The rod, from which the screws are to be made, is carried through the hollow spindle A, and fed forward flies violently up and down until the machine is work is attached. The price of these machines one of which is now in place. There will be by the lever B. The revolving turret head C, operated by the lever D, is carried forward, and the stop E adjusts the rod to the requisite length for making the screw. The turret head is then revolved one-eighth turn, bringing the milling tool F into operation, which cuts the body of the screw to the desired size. The turret head is now revolved one quarter-turn, bringing the solid die at G into operation, which cuts the thread; at the same time a cutting-off tool is operated by the lever H, which cuts the screw from the rod.

During the time occupied by the milling tool at F, another screw which has been carried in the die G (in which it was threaded and cut ofi), to the saw or slotting tool at I, has the alot cut in it. And during the time occupied in threading the screw by the die at G, the slotted screw is released by the screw driver at K. The release of the screw is effected by a reverse motion imparted to the opposite die holders, one running in the same direction as the mandrel, and the other reversed, this reverse motion being automatic and independent of the spindle.

The stops are replaced by thimbles or blank holders; the milling tools by die holders, so that the turret head contains four blank holders and four die holders. Blanks are inserted in each blank holder in succession as the turret head revolves. The turret is carried forward. and the blank is gripped firmly by the chuck at M. The turret head is revolved one-eighth turn, when the die comes into operation and cuts the thread. The chuck then opens, leaving the screw in the die holder to be carried for ward to the slotting tool and screw driver, the slotting and releasing being performed while the succeeding screws are being threaded.

The proprietors, the Hubbel Screw Company, 212 Pearl street, New York city, claim that this machine has a great variety of advantages. The more important are thus stated: In making screws from solid rods, the screw is milled, threaded, cut off and slotted in three motions. There is no reverse motion of the counter shaft. The spindle is always running in the same direction; the die holders have a simple external locking device; injury to the threads is avoided by the screw being released by the screw driver, which it is enabled to do by means of reversible die holders; a simple device enables the turret head to be revolved automatically by the motion of the lever, either one-quarter or one-eighth of a The screw being slotted in the die in which it is threaded, is held firmly and perfectly true, avoiding liability to jump and destroy the slotting tool, at the same time preventing the marring of the threads by the jaws which have to be used in other machines for holding the screw during the slotting operation. The slotting tool is fed by the waste oil from the cutters and dies, and is thus kept continually lubricated; a continuous stream of oil is thrown upon the cutters and dies thus keeping them clean and free from chips The chips or cuttings and the screws are delivered at different points; the device for introto the chuck insures each one being truly centered, and saves the time required to stop the spindle and true up the blank. In making set screws the alotting tool can be replaced by a milling tool, so as to completely finish the end of the head, and the plain screw driver by a forked screw holder to release the screw from

The Bexter Scroll Saw and Emery Grinder.

We show in the accompanying illustrations two useful and convenient foot-power machine tuols, manufactured by Messrs. Trump Bros., Wilmington, Del. The scroll saw is a model of simplicity, and is said to do excellent work. It is a cheap machine, but materials and workmanship are good. They are made of iron and steel throughout, except the bows and treadlerods. They are very carefully made and fitted, and neatly finished; will hold the finest to coarsest saws; and the small size will cut 11/2 inch stuff, if desired, but they are recommended for light work principally.

The frame is a solid casting, provided with a clamp G, to secure it to a table or bench. iron plates on the back end. These plates have knife edges carefully made, upon which the bows rock with little or no friction. The front ends of the bows are fitted with pivoted steel screw clamps A B, for holding all sizes of saws. The plates on which these swing are altered, if desired, or corrected if it does not

In place when from any cause the saw is d is and make, under 4 inches diameter and ¾ are simply light bridges built of oak and iron connected. In other machines of this descripinch thick, can be used. Each end of the stopped In the Dexter the arm is brought at is \$6 each. once to a standstill, though the balance of the machine continues in rapid motion.

The treadle arrangement is a floor piece or frame K, upon which is pivoted the foot piece Bridge are to be made and swung, is a question men in the cradle, and every wire, as soon as it

The East River Bridge.

former is forced up, and the latter down, or in noted from time to time the progress of the those previously laid, until all are in place for a

five of these, three of which will be stationed the approaches. The tautening or relaxing of

The Hubbel Patent Self-Slotting Screw Machine.

cupped nut C, containing a spiral spring. which so light an apparatus is capable. With this and the stop in the back end of the frame ordinary treadling a speed of 3500 revolutions by the keen sight and good judgment of the rods, the other to "serve," or, speaking less hold the upper saw arm still, and the lower one per minute is obtainable. Wheels of any grade workmen in the "cradles." These "cradles" technically, to wrap around this tightly compressed mass a single galvanized steel wire, somewhat less in diameter than those employed tion, when a saw breaks, running at a high spindle is provided with plate hubs for wheels five feet long, which will be depended across in the cable. In but two places will this speed, there is danger to the hands, as the arm with 1/2 inch holes, and an adjustable rest for the line of the bridge from the stout cables, "serving" be left off. Those are where the cables pass over the enormous iron saddles, or troughs, in which they will lie on the tops of on the great central span, and one on each of the towers. Were it necessary to continue this serving here, it could doubtless be done, but How the great cables of the East River each wire will be governed by signals from the the task of twice raising the nine hundred tons weight of each cable to admit of it would be and rod J E, and the counter rod L H. The of interest to a great many people who have is regulated, will be firmly bound by lashings to stupendous and not repaid, it is believed, by

any resultant advantage.

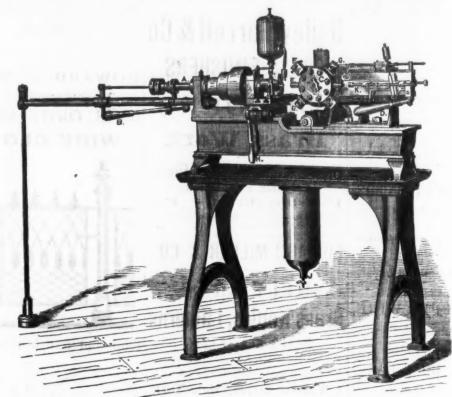
Nothing more can be done this winter than covering in the tops of the anchorage piers, which, for obvious reasons, cannot be completed until the cables are finished, making the necessary preparations by laying the remaining foot-bridge and cradle cables, of which there are to be in all five, for the great work of cable making and building the workmen's foot bridge. When the making of the cables will begin depends entirely upon the furnishing of the steel wire, for which specifications and invitations for blds have been sent out to all the leading manufacturers of this country and Europe. Thirty-four hundred net tons of galvanized steel wirs of No. 8 Birmingham gauge (a little more than half as thick as an ordinary lead pencil), capable of sustaining a strain of \$400 pounds without breaking, will be required. At least 150 tons per month will have to be supplied and tested, and it is not deemed at all pos-sible that, with the utmost expedition, the cables cannot be completed within less than two years from the present time. Then the building of the bridge proper, with its six gigantic fron trusses, which are to be pendant from the cables, and of much greater weight than they; its great storm cables, which will curve across each other twice beneath the floor; its subsidiary storm cables, 150 long at each end of the main span; its mile and one-sixth of roadways, passenger way and railroad tracks; its long approaches, with their heavy piers, &c .. will altogether take two years more at the lowest calculation. Hence it will be four years, even under the most favorable condition of affairs, before the East River Bridge will be completed, and we will be enabled to boast of the longest single span bridge in the world, 159634 feet in length.

At present only 25 men are at work upon the bridge, who are all that can be employed to advantage in the existing condition of affairs. No steps have yet been taken toward the acquisition of the property which it will be necessary to purchase for the approaches of the bridge on both sides of the river, and about seven millions out of the total estimated allowance of thirteen millions of dollars for its completion have been expended.

The Electric Telegraph in Africa.—The Journal of Chemistry says: It is proposed to carry a wire to the Cape, across the African continent. There is at present telegraphic communication from Alexandria to Khartoum, a distance of eleven hundred miles, and surveys have already been made for its continuance to Gondokoro. From Kuartoum to Delagoa Bay, where the South African lines terminate northward, is only about 2600 miles shorter than existing lines on the other three continents. The route would lead under the Victoria Nyassa and langanvika lakes, and thence down the Shire and Zambesi rivers to the sea, where a short ocean line would connect it with Delagon Bay or Port Natal. A branch would go from Ujiji to Zanzibar. Of the 1500 miles or so of aerial line it is suggested that much might be erected without the expense of poles by taking advantage of the trees over thickly wooded tracts, which are frequent in tropical Africa. The difficulty would be to keep the natives from stealing the wire in regions where iron is scarce and valuable, but this might be got over. The telegraph, if it could be established and kept in working order, would be exceedingly lucrative, and would in many ways aid in opening up Africa to commerce and civilization.

Jane Grey Swishelm writes from Leipsic: "The double floors which are universal here ought to be so with us, for the space between is filled with ashes; so, with thick partition walls, it is next to impossible to burn a house down. I am told they have no fire engines in be composed) to snap wherever it is nicked, the anchorage pier. From where the strands Germany, and do not fight fire with water, but minute, and as 800 to 1000 strokes are ample The end was achieved, however, in a very in- join in the cable to where they pass with ashes, clay, sand, old mats and axes. There has not been a fire alarm in Leipsic since we came to it, which was the 27th of

Dynamite is being successfully used in Scotland, in clearing land of trees, stumps, and boulders. The boulders are pulverized by merely placing the dynamite on the top of the stone, covering it with wet sand and firing it with a fuse in the ordinary way. Trees and stumps are torn out by the roots and split into desideratum in such a machine. It is a machine will first be stretched for each strand. Then wires in each cable. To do this two powerful kindling by placing a small cartridge of the exthe huge bundle of strands, and grip them to. below the surface.

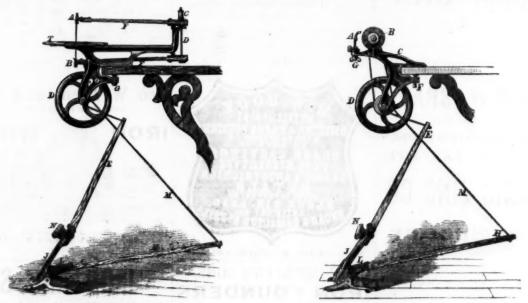


THE HUBBEL SELF-SLOTTING SCREW MACHINE.

opposite directions, by springs. A single cord work. We shall endeavor to answer this instrand, thus necessitating cutting and relastions strap M, the ends of which are fastened to quiry, and explain what part the cables now ing of the temporary bindings 333 times for the ends of the treadle rods, is passed over stretched will play in the finished works. the hub of the driving wheel D, in which is cut a V groove. Pressure on the foot piece forces pleted, be fifteen inches in diameter and will through the two anchor links which are to conthe cord into the groove, and causes a rapid rotary motion of the wheel; as soon as released contain 333 wires, so that the total number in pier. The strands will spread out from the end

Each of the four great cables will, when comcontinuing its forward movement; the slack lengths of 800 or 1000 feet each being attached and eight inches square. All this, however, is

each strand, or for 25,308 seperate wires in the four cables. Each wire, will, of course, be led consist of nineteen strands. Each strand will stitute its permanent fastening in the anchorage the foot piece returns to its original position, throwing the cord out of the groove, the wheel strand will consist of a single wire, the separate anchorage links for each cable will be five feet



THE DEXTER SCHOLL SAW

With ordinary treadling 1600 revolutions of the wheel and strokes of the saw are made per for sawing, it will be seen that work may be genious manner, by making tapering male through the links will be twenty-five feet. It rapidly executed with this machine with but little labor. The machine is so simple that each two ends together by a collar, in which is far given that the strands lie side by side close- last April." The bows F F, of hard ash, are fitted with but few directions for setting up and running cut a female screw right and left at the opposite by together without any twist, and that the are required, and the cut shows the whole arrangement plainly. Should the groove become Wire is being wound upon the huge drums, ly straight. In this position they are intended smooth and the cord slip, a little beeswax will eight feet in diameter, on both sides of the to permanently remain, so that there is nothing make it adhere rigidly.

for a detailed description. The Dexter treadle wires, one for each cable, will be stretched aim- rial of which they are made. It will be necessary, adjustable, so that the pitch of the saw can be gives a very high speed, which is the principal ultaneously. A guide wire of known tension however, to fasten firmly together the 6827 for the artisan, jeweler and dentist, as well as the numerous cable wires will, one by one, be machines will be employed, one to gather all ploaire well into the side of the stump a little The straining-rod D is provided with a the amateur mechanic, and does all the work of paid out to exactly the same tension.

cord is instantly taken up by the counter rod, | together. This attachment was found to be a | to be when the bridge is finished inclosed in and the treadle is then ready for another propel-ling movement.

matter of very considerable difficulty, owing to the impracticability of welding and the ten-be the smooth round cable, fifteen inches dency of steel wire (of which the cables are to through, springing seemingly from the face of screws on the ends of the wire and fastening will be understood from the description thus ends. These attachments will be made as the wires in them are also laid parallel and perfectriver. Endless traveling cables will carry the of the system of construction of the ordinary The emery grinder and polisher scarcely calls wire across, both ways at once, so that four wire cable in this formation beyond the mate-

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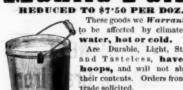


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By this process oxygen is imparted to the blast simply by its passage, on its way to the place of con By this process oxygen is imparted to the blast simply by its passage, on its way to the place of combustion, through a chamber or vessel holding an oxygen compound, from which, by the agitation of the air thereon, oxygen is set free and thus imparted to the blast. The required volume of this blast is one-half less. The combustion becomes perfect therefrom, all the carbon is the fuel being converted interaction. Beside a saving of fuel, obtainable in all cases by this blast, advantages arise from it varying according to the appliance of the heat.—On Forge Fires it gives a clean and intense hear, free from all sniphurous gas, whereon a better and quicker welding is had and time saved. On free under boliers for making steam, the saving in fuel is 25 per cent, and over, the working capacity can be increased in same ratio by reason of the intensited and accelerated combustion, which latter also overcomes the disadvantages connected with the use of fine dust and impure coal. Castings from a cupola in which the fire is sustained by this blast become of saperior quality, uniformly soft to work and very tough, resembling wrought from and steel; they forge hot quality, uniformly soft to work and very tough, resembling wrought iron and steel; they forge and cold to some extent; the iron becomes strengthened and purified, being freed from carbon and sulphur. For blast furnaces this process becomes of vast importance—it saves fuel, increases the working capacity, perfects and reduces the cost of the metal, makes sulphurous and other impure ores fit for use. The serious drawbacks srising from imperfect combustion, cames mainly by otherwise uncontrollable atmospheric influences, are overcome. The work of a puddling furnace and that of decarbonizing the iron, both for a parameter is a puddling furnace and that of decarbonizing the iron. mospheric influences, are overcome. The work of a puddling furnace and that of decaphonizable the state of the work of a puddling furnace and that of decaphonizable the state of the purposes generally, is much simplified, shorened and perfected as to purity of product: the work of so many hours is reduced to as many minutes by this process. The process has the merit of being simple and easily applied, and with but very little expense, and this only for the needed chamber or vessel and its connection with the blast pine; the vessel may be a wooden keg, barrel or larger eask or tank, properly lined, from two galtons for a single forge fire up to 560 gallons and over, according to the blast in use. The cost of the oxygen is conditioned by, and made subject to, its effect—it is but a small time compared to the gailon from it. Although this process has been in practical use for over a year, Item compared to the gains from it. Although his process has been in practical use for over a year, the inventor feit reluctant to offer it to the public before having its stility and practicability fully established, beyond any and all contingencies, not from a theoretical standpoint, but from the testimony of manufacturers who have used the process this inst year, and whose standing and reputation as manufacturers are of the highest order, and such as to entitle them to the consideration of others. For other interesting and for small for the discontinuous continuous continuo a, and for small specimens of eastings from this process, addres

CHAS. HORNBOSTEL, 56 Broadway, Room 26, N. Y.



Bessemer Steel at the Centennial.

THE BETHLEHEM IRON COMPANY'S display was another of those exhibits that was the occasion of the greatest regret to those ac- in fact almost every point of interest in relaquainted with the character of our iron and tion to this extensive establishment. How steel works. The reputation of this company is second to none for their plant, their processes the exhibits. In the Main Building they disand their steel, and yet it was only after a long played a pyramid, constructed of sixty different search that we found their exhibit, to find it sections of iron and steel rails; iron and steel almost swallowed up by its surroundings. Still representing the various stages of manufacwe suppose the company have their own reasons | ture; bars and rails showing tests by tortions, for the modest display they have made, and no compressions, tensile strains and abrasions in doubt feel confident that at home and among actual service, with record of chemical and practical men their exhibit will have little mechanical tests and analyses; also, photoinfluence. among our foreign visitors that it had been more complete and extensive. By an act of the Legislature of Pennsylvania of March to consumers. In the Mineral Annex an arch, 31, 1857, the Bethlehem Rolling Mills and exhibiting pig metal from which the iron and Iron Company were incorporated, though it steel rails of the company are made, and exhad had an existence under another name some time before. But little was done, owing to various causes, until the fall of 1862, and on of iron, hematite, levant and other fossil ores Jan. 4, 1863, the blast was put on the first furpuddled July 27, 1863, and the first iron rail used in making metal for steel rails; also rolled Sept. 26 the same year. In July, 1868, it was resolved to undertake the manufacture of cokes and semi-bituminous coals; refractory steel rails. The Bessemer works made the first materials, viz., fire-clay and ganister. Also blow Oct. 4, 1873. The rolling mill for steel photographic views of mines and mining marails was under the superintendence of Mr. John Fritz, and is one of the finest in the world. It is built in the shape of a Greek cross, has an ties of area, production, &c. The Cambria extreme length of 931 feet, and covers an area Iron Company were organized under the general of 164,391 square feet, i. e., upward of 4.6 acres of ground. This colossal structure is covered 1852, but was at first unsuccessful and was with a slate roof, resting upon grooves of cast leased in 1855 by Wood, Morrell & Co., at ron without supporters, presenting in the interior an elegance of design and construction town and became general superintendent. In quite singular. The 24 and 26 inch rail train is 1862 the company were reorganized, and in 1873, 124 feet 9 inches in length from center to center of engines, with engines at each end (one with present organization was constituted, viz., 48 inch diameter of cylinder, 46 inch stroke, the other 56 inch diameter of cylinder, 48 inch stroke), and is the largest continuous rail train | urer, and D. J. Morrell, general manager at in the world. The 31 inch blooming train is Johnstown. Of the original directors elected run by an engine with 36 inches diameter of ylinder and 60 inches stroke. The mill con- Wood and Charles S. Wood are dead, and tains four sets of saws, with double engine for George L. Oliver, John M. Kennedy, George each set; a double blowing engine for the Besmer works; two 5 ton Bessemer converters, with a capacity of 200 ton of steel per 24 hours; cupola engine, and seven Siemens regenerave gas furnaces for heating purposes. The Bethlehem Works consume annually 70,000 tons

nterprise. The exhibit of the

LACKAWANNA IRON AND COAL COMPANY, mplete and satisfactory in the direction that analyses and statements of tests. This comhave formace plants both in Scranton, Pa., and Franklin Furnace, N. J., and extensive iron and Bessemer plants at Scranton. The New Jersey portion of the works is conducted under another firm name, but the companies are nearly if not the company, one at Scranton, and the other at Franklin, N. J., are the largest in the country, being 80x23, or 5 feet higher and 3 feet larger burg and one at Frankstown, operated in the boshes than the Lucy and Isabella furing the name of the Blair Iron and Coal Comnaces, at Pittsburgh. The ores shown were from nace, N. J., Furnace Vein and Taylor Vein, also New Jersey. The analyses of the ores are as follows:

etic oxide and from 90,000 to 100,000 tons of

oal. Fully 1400 men are employed in this great

Silica	Point. 23:95	Vein. 20:45	Vein. 1.76	Vein. 12.95
Oxide of iron	73:51	77.70	81.70	77:94
Alumina		1.16	0.45	4:06
Lime		0.25	18-25	2.75
Magnesia				0.75
Phosphoric acid	0 04	0.032		0.67
Oxide of manganese.	0.25		2:08	
Metallic iron	53.24	56164	59.16	56.75
The pig iron mad	le from	this b	as the	follow-
ing composition:				
1	No. 1	No	. 2	No. 3
Be	essemer.	Besse	mer. Be	essemer.
Silica	3.45	2.	80	2.07
Carbon	3.60		47	3.50
Phosphorus	0.035	0.	04	0.035

the casting pit 38 feet diameter, 21/4 feet deep with a 12 ton hydraulic crane ladle. The hydraulic machinery is worked by a hydraulic duplex pump with ten 30 inch steam cylinders; 2 water cylinders 9 inches diameter 24 inch stroke. In the engine room are located 2 independent horizontal and condensing blowing engines 50 inches in diameter, and a blowing cylinder 54 inches diameter and 5 feet stroke. These furnish the blast to the converters at the

ent articles, but the completeness of the Cam-

bria exhibit was not in this, but in the setting forth of the various materials used by them and the various products, together with analyses, tests, both mechanical and chemical, and complete this is will be best shown by a list of We could wish for the effect graphic views of machinery, buildings and mahibiting also the ores, fuels and fluxes used in used in making metal for iron rails, and limon The first iron in the rolling mill was ite, manganiferous, specular and magnetic ores limestones, calcitic and dolomite; fuels, viz., chinery; methods of preparing ores and fuels; plans of workings; geological sections; statisiron manufacturing law of Pennsylvania in which time Mr. D. J. Morrell moved to Johnson the death of Mr. Charles S. Wood, the E. Y. Townsend, president; Chas. S. Wurts, vice-president; J. T. Kille, secretary and treas at the reorganization of the company, Richard Trotter, E. Y. Townsend and D. J. Morrell are still in the management, having Samuel Welch, Samuel J. Reeves, Chas. S. Wurts and Henry Lewis associated with them as directors. The mills of the company and four of their furnaces are at Johnstown, Pennsylvania, on of Pennsylvania hematite and New Jersey mag- the line of the Pennsylvania Railroad, 78 miles east of Pittsburgh. The ore of this locality produces a quality of iron which is specially adapted for service in a railroad bar; and this, in connection with large deposits of coal, fireclay and cement, gives to Johnstown peculiar of Scranton, Pa., though not very extensive, it advantages for the manufacture of iron and being contained in a small show case, was quite steel rails. The Centennial exhibition of the company, heretofore described, showed, it is so many displays are wanting, viz., detailed claimed, fully and fairly average specimens of their various materials and manufactured prodpany own extensive mines of coal and ore, and ucts, and the extent of the possessions of the company is indicated by the places of their production. Manufacturing operations are conducted in the counties of Cambria and Blair, and mining in Cambria, Blair, Bedford and Huntingdon. The company have four blast quite identical. Two of the furnaces owned by furnaces in operation at Johnstown and one at Conemaugh. The four furnaces east of the mountain, one at Bennington, two at Holidayspany, are under the general manager of Crown Point, N. Y., Hill Vein, Franklin Fur- Cambria Iron Company. The company are erecting, and will soon put in blast, a new furnace at Johnstown, having all the modern improvements, and of the estimated capacity of Hill Furnace Taylor Vein. Vein. Vein. 1.76 12.95 77.70 81.70 77.94 was successfully inaugurated at Frankstown, will be carried on at Conemangh Furcace, which has been thoroughly refitted for this pur-Phosphoric acid... 6 04 0 035 ... 948 pose. The Bessemer steel works, blooming 20 miles of railroad of ordinary gauge, in, about, and connecting their works, and as many miles of narrow-gauge track in their mines, and 13 locomotives are kept in constant service. Beginning with a product of 10,000 tons of rails in 1855, the company have made, year by year, one-tenth of the total product of American rails, their contribution up to this time being more than a million of tons, and the works now have the capacity to produce a hundred thousand tons of iron and steel rails per annum. Cambria steel rails were first made in 1871, and were sold in 1873 at \$125 per ton, which was then about the ruiling price of English steel These furnish the blast to the converters at the rate of 9500 cubic feet per minute, and under a pressure of 20 pounds per square inch. The boiler house is occupied by a battery of six square feet grate surface, 1504 square feet heating surface, and 112 tubes 16 feet in length and 3 incheš in diameter.

THE CAMBRIA IRON CO.'S exhibit at T 65, Main Building, and at W 66, in the Mineral Annex, was unquestionably the most extensive and complete of the American iron and steel exhibits. There were other exhibits which included a much larger number of difference between that and the present price of steel rails is an evidence of the skill and economy developed in the management of this new industry, and fillustrates the advantages to consumers which always result from protection to home labor. Mindful of the importance of extendigh the uses of Bessemer steel, the company are preparing to place a portion of their product upon the market in the form of wire, screws, and other articles for which doing this the company propose to maintain and improve the character of their rails, to meet the market in their prices of English steel rails. The difference between that and the present price of steel rails is an evidence of the skill and economy developed in the management of this new industry, and fillustrates the advantages to consumers which always result from protection to home labor. Mindful of the importance of extendid the united by advantages to consumers which always result from protection to home labor. Mindful of the importance of extendid the united of their production to home labor. Mindful of the importance of extendid the united of the interval of their production to home labor. Mindful of the importance of extendid the united of the importance of extendid the included the included the included the included the included a much larger number of difference of the included a much larger number of difference of the included t was then about the ruling price of English steel rails. The difference between that and the

(To be continued.)

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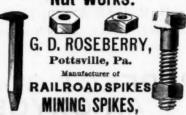
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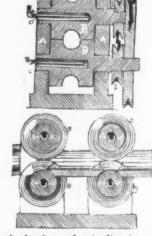
Every machine is tested by actual work, and will easily make the whole range of work claimed. The Enives being sharpened and adjusted before leaving the factory, gives to the mechanic a tool ready for immediate use. The cut is for brace use; the size larger is used with a crank. For sale by

CHAS. M. GHRISKEY, 508 Commerce Street, Philadelphia, Pa. eduction pipes connecting with a separate con- gether.

New Patents.

We take the following abstract of new patents, recently issued, from the official record :

ROLL FOR WELDING AND FINISHING TUBING. To Mildred Blakey, Ætna Borough, Pa.-Oct. 3.-1. In rolls for working hot metals, a water chamber c, extending from the ungeared end of the roll, through the working part of the roll, and terminating in a closed end, in combination with a water supply pipe of less exterior diameter than the chamber, arranged



in such chamber, and extending to, or nearly to, the closed and of the chamber

2. The combination of grouved pipe rolls B B' D D', connected by a guide, and arranged and geared to co-operate in finishing metallic pipe, when one of the rolls D, which is in tended to operate on the joint of the pipe, is geared to operate at a different speed from

COMBINED TIME AND COMBINATION LOCK.

To E. Stockwell, Stamford, Conn.-Oct. 3 1. The combination of the bolt work, the spindle for operating the same, one or more time mechanisms, and suitable connecting mechanism operated by the time mechanism whereby the spindle and bolt work may be automatically connected and disconnected.

2. The combination, with the bolt work, or safe door, and with its operating spindle eassing through such door, of two independ ent sets of permutation wheels or tumblers relatively so constructed and combined by neans of suitable intermediate connecting mechanism as that, by the concurrent locking

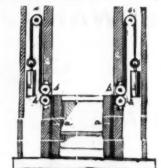


of both said sets of tumblers the connection between said bolt work and said spindle may be severed, and that, by the unlocking of either or both of said sets of permutation tumblers, the connection may be restored between said bolt work and said spindle.

3. In combination with the bolt work of a safe door, and with its operating spindle passing through such door, one or more sets of permutation wheels or tumblers, and one o more time mechanisms provided with suitable connecting devices, whereby the connection between said bolt work and said spindle is controlled at will by either or all of said sets of permutation tumblers, or by either or all of said time mechanisms.

4. In combination with the bolt work of a safe door, and with the operating spindle thereof passing through such loor, and a movable connection for connecting the bolt work and spindle, a support V, or its equivalent, operated through suitable connecting devices by me or more time mechanism

To W. Woodward, Nashville, Tenn. -Oct. 3 The use of three pulleys, and their relative loca tion, serving to conceal the cord entirely from



view, and at the same time to give greater range of movement to the sash, permitting if to b noved its entire length.

The combination, with the sash, having grooved edges, of the two pulley , b h, located in the middle of the frame, the pulley c, located above the same, and the cord a, having weight d attached and passing around pulley tween pulleys bb, and attached to the bottom of the sash.

183,775 .- Apparatus for Distilling Oil .- Henry C. Rose, Cleveland, Ohio.-Oct. 3.

Oil is distilled by fire and free steam heat. It is run through a series of connected hori-

denser, whereby oils of different gavity are ob? tained. A perforated steam pipe extends into each distilling pipe for admitting free steam into the oil.

182,801.-Spirit Level.-Burkner F. Burlington and Lewis H. Priest, South Lancaster, Mass. Oct. 3.

The glass tube surrounded by rubber.

182,808.—A Composition for Economizing and Assisting the Combustion of Coul.—Morris B. Eaton, Le Roy, N. Y .- Oct. 3.

The compound for treating coal, consisting f Glauber salts, wood ashes and fine coal, in the proportions substantially as named, and applied in a powdered form.

FENCE POST

To John E. Warren, Westbrook, Me. - Oct. 10, The combination, with the cast iron foot or standard a, having the two arms br, caps d,

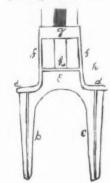


plate e, side pieces f, socket g and flat surface h, of the wooden post.

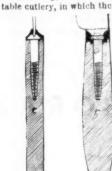
PORTABLE FORGE

To L. H. Watson, Cleveland, Ohio. - Oct. 10 .-1. The bracket or crane P, supporting the wheel C, gear D and pinion E, and provided



with the sleeves and set screws J J and the projection H, in combination with the stop I. 2. The fan blower in combination with the forge and the mechanism for operating the same.

TABLE CUTLERY. To James D. Frary, New Britain, Conn .- Oct. 10 .- In table cutlery, in which the blade is con-



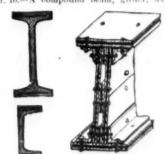
ders on the bolster end of the handle, combined with a bolster cast upon the blade and into such shoulder.

ART OF MANUFACTURING ANGLE IRONS.
To Chas. P. Haughian, Brooklyn, N. Y.—Oet. 10 .- As an improvement in the art of manufacturing angle irons, the method of first con-structing a pile of alternate plates of iron and chrome steel, heating the same to the



proper temperature, and then passing the same flatwise between rollers, which, at the same time, welds the pile and imparts the initial bend, and repeating the passes through other grooves of properly graduated forms until the bur has been brought to the desired shap-

COMPOSITE METALLIC GIRDER. To Charles P. Haughian, Brooklyn, N. Y. Det. 10 .- A compound beam, girder, fluged



plate, or analogous structure, for architectural, engineering, or shipbuilding purposes, consist Manufacturers' Agent, zontal distilling pipes, each of which has vertical ling of iron and steel inseparably welded to-

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- renc.

 For the percent, of Carbonate of Lime, and insoluble Silicious Matter in a Limestone......

 For each additional constituent.....
- For the per cent. of Water, Volatile Combusti-... 12 50 Matter, fixed Carbon, and Ash in Coal ...

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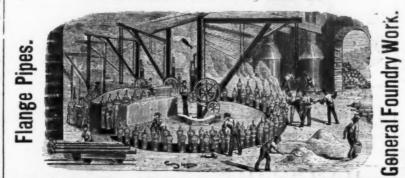
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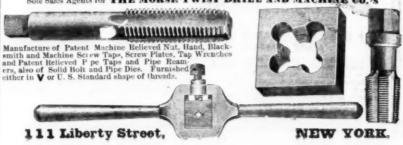
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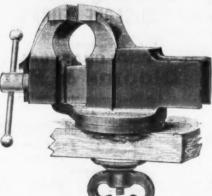
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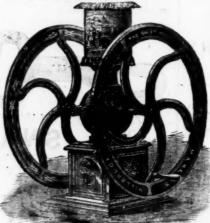
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CAUTION.—The public are notified that in my suit against Imhæuser & Co., of New York, a decree as made in my favor, June 10, 1874.

Proceedings have been commenced against said Imhæuser & Co., for selling clocks contrary to the reder of the Court, and especially the clock with a series of springs in the cover, and marked "Patented cf. 20th, 1874."

All persons discovered using these infringing clocks will be dealt with according to law,

J. E. BUERK, Proprietor,

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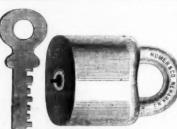
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THE COMPENDIUM OF ARCHITECTURAL SHEET METAL WORK (Illustrated), embracing rules and directions for Estimates, Items of Cost, Nomenclature, Tables of Brackets, Modilions, Dentils, Frieze Picces, etc.; Architects' Specifications, Tables of Tin Roofing, etc., etc. pp. 550, \$10. Salem, Ohio. The Kittrodge Cornice and Ornament Company.

This is by far the most elaborate handbook of any trade or industry issued in a long time. That it is the result of careful labor is evident in every page. The amount of comprehensive detail contained in it cannot be ap preciated save by an inspection of the book it self. There are few lines of trade which have received as careful analysis and systematic treatment in its literature as what is commonly known as the cornice business. A casual in spection of the volume before us induces the belief that all the leading features of the indus try are presented and discussed, while more careful attention shows that every feature of the business has received attention, and every difficulty been anticipated and explained.

The importance attaching to the sheet metal rork used about buildings is hardly appreciated by the general public. Tin work, roofing. spouting, etc., the public is somewhat familiar with, and mechanics are found everywhere who are competent for all kinds of work in this line When it comes to architectural forms in sheet metal, although this trade of late has grown to be a very important one, there are fewer competent mechanics to be found. The book before us is an instructive work—a book of rule and a dictionary in one. Its intent is to familiarize the building trade with styles, forms prices, etc., of architectural sheet metal work, and thereby render it as familiar as other well known branches. It commences with a description of "items of cost" and a glance at method of estimating," followed with a concise description of the nomenclature or technicalities peculiar to the trades described. After once mastering the theory of a business, and this to the average business man is but a small effort, the application comes in the practical shape of cost and prices. The book we are de scribing, after the brief introductory just men tioned, commences at once upon the main ssue. Each part of a cornice is taken up in turn and priced in a variety of styles and dimen sions; moldings of various forms are given for all girts, from 5 to 30 mehes, and of each of the gauges in common use. Brackets are then introduced, commencing with one with plain face and plain side and by constant variations and recombination; presenting types of almost all possible styles up to the most ornate. Over one hundred designs are given, and price are given for about one hundred and eighty variations in size for every design; modifions are treated in the same general manner. Then follow dentils, trusses, stop blocks and frieze pieces, each in turn presenting an assortment of designs and such a range of sizes that it is scarcely possible to fail to find what any requirement may demand. Nearly two hundred pages of solid table matter are devoted to the subjects above described. Following this we find an example of estimate in detail, presenting a full set of architects' drawings, with the estimate in full, showing the eminently practical character of the tables presented.

Our space does not permit an exhaustive re view of the book, and we must confine our re-marks to generalities. The system of estimating shown is that of careful analysis and the pricing of all the parts in detail

Analysis is the characteristic feature of the book throughout. In the part devoted to ornamentation we find probably the finest assortment of designs ever presented, carefully arranged and classified. In this connection, too, should be mentioned the examples of use which are introduced, embracing fine engravings of the ornamentation upon the Centennial buildings and various other public edifices.

A very prominent feature of the book is its tables of tin roofing. A series of tables is given, one set of which shows the quantity of tin, of either size, required for any given roof, whether of standing seam or flat lock; and the other Another table shows the net cost per square foot, and also per pound of galva iron at any discount from 21/2 to 60 per cent. The use of these tables alone as a mere matter The Minister of Finance asked for a sketch of convenience would repay the cost of the ook in one scason's business

The book, in its conception and contents, also to the builder and architect. While the former may have the most immediate interest trade, the builder, and more especially the bility of their structures.

of diagrams showing the best constructions of cornices, with directions for putting up. A marking work is also presented. Some 200 designs of window trimmings, and about 50 pattion of the principles and rules laid down in the first part of the book. Every help is given to the tradesman as well as the mechanic in the development and management of a specification for sheet metal work which is given as written by a mechanic.

The work bears upon each page the imprint of its publishers, the Kittredge Cornice and Ornament Company, and to some it would seem to be shows that its use is not confined to so narrow S. ROEBUCK & CO., a field. A catalogue of architectural work, especially of work constructed in a material of such eminent adaptability as sheet metal, is al-NEW YORK. most an impossibility. Suggestions and ex- tie in this iron age.

mples only can be presented. Ownership of designs is out of the question. The publishers of this book have, doubtless, by the extensive outlay of money involved therein, added much to their own prestige, as well as contributed materially to the efficiency and system of their own business. But what they have done for themselves is a small matter compared with the benefit they have conferred upon the trade at large. Enabling every tinner to become an in telligent cornice worker, making it possible for an architect to accurately estimate the cost of his own design, and for builders to calculate their bills without the annoyance of bids from sub-contractors, are results of very great importance. The publishers, in placing this book n the market, have pursued a liberal policy, and are entitled to all credit therefor.

The book contains altogether about 2000 engravings. It is handsomely printed upon tieted paper, and neatly and substantially bound. It deserves a place in every mechanic's and builder's library, and should be found in every archi-

MERCANTILE REPORT AND DIRECTORY COMBINED, OF THE HARDWARE AND METAL TRADES OF THEE LINITED STATES, alphabetically arranged according to States and Territories, 1876-7. Price \$25, New York. William P. Cleary & Co., 319 Broadway. P. O. Box 1790.

The scope and contents of this work are so fully explained in the title that we do not need to say much concerning it. It is well printed on suitable paper and substantially bound in cloth. Of the value of any commercial register or directory it is impossible to speak confion short acquaintance. given the book a somewhat careful examination, and it seems to be generally as correct as such a work can be expected to be. The names and addresses given are probably correct in the main, the ratings in such cases as we have examined with some personal knowledge of the facts, seem to be fair and impartial. The arrangement of the contents of the work is ood, and the volume is of convenient size for the library and desk. Considering the labor and cost of compiling such a work, the price charged for it is probably not too high.

A Manufacturers "Ring" in Germany.-The Pall Mall Gazette says: The establishment of "rings" for the purpose of die tating prices in the markets, which commenced ed in the United States, is now becoming universal, and a remarkable attempt in this direction has, according to the New Freie Presse, been lately made in Austria by a select circle of Bessemer steel manufacturers. Nine of the most important producers of railway metals have entered into a compact to distribute among each other a given percentage of all the contracts for railway metals which may be given out in Austria between the present time and the year 1878. The plan of operation is to be as follows: The subscribing firms are to arrange among themselves which of them are to tender for contracts offered either by the Austrian railway companies or by the government. The price is to be fixed according to close calculation of the cost of production and of transportation from the works to the destination of the metals. Spurious tenders at higher prices are then to be sent in by the remaining firms, thus insuring the acceptance of the tenders sent in by the selected firm or firms, seven thouand tous being the limit assigned by the agreement to the contracts to be received by the as-sociated firms. This snug little arrangement is ot likely to be interfered with by foreign competition, inasmuch as no order for railway netals has since the crisis been placed out of Austria by either the government or the railway companies, the object of this restriction being the employment of the Austrian working classes and the support of the existing establishments. Unfortunately one of the smaller Bohemian firms has, in the most unprincipled manner, lately tendered at lower prices than those fixed by the "ring," and thus thwarted heir scheme for the present.

French Engineering .- The project of a great maritime canal between the English Chanshows at a glance the cost of tin per square for nel and the Mediterranean is being more and either style of roof and of either size of plate, more considered in France. The delegates of with tin at any price from \$6 to \$40 per box. chambers of commerce have, it appears, formed themselves into a commission to promote its execution, and have explained the project to various members of the national government. the necessary works and the cost, and the Minister of Public Works has acknowledged the advantage of a canal serving for vessels of 250 appeals to the tinner or cornice worker, and or 300 tons. It seems that, in regard to the financial aspect of this undertaking, the commission, adopting the estimates of the most rein it on account of its help in way of profitable liable engineers, put the cost at some sixty-five million francs, or about thirteen million dollars, architect, will derive assistance from it by its of which three millions will be expended on the comprehensive presentation of principles and Seine and the Youne, two millions on the Burdetails which concern the cost, beauty and dura- gundy Canal, and the remainder on the Rhone ; these being of course the approximate amounts. In the latter part of the book is given a series The depth would be thirteen and five-tenths meters on the Rhone, and two meters elsewhere. The locks would be uniformily one hundred plan of construction, drawings and system of and thirty-three meters long and tweive broad on the cauals. Transshipment would in any case be necessary only at Lyons. As to the terns of cornices illustrate the practical applica- length of time required for such a work, the engineers' estimate is six years, provided no unusual difficulties present themselves.

Even ancient Jerusalem is to be roused from her sleep of centuries by the whistle of the locomotive. An enterprising railroad man residlug in Palestine has proposed to the Pope to connect Jaffa with Jerusalem by a railroad, and both that potentate and the sultan have given only a catalogue limited to the product of their their approval. The distance from the scaport establishment. A moments' reflection, however, to the Holy City is only about thirty miles, and twenty-five miles more of rail would take the traveler through to Jordan and the Dead Sea. "All aboard" for the shrines of Christendom, and death to everything venerable and roman-

USE THE



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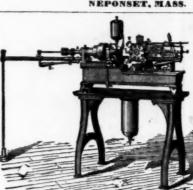


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FORGERS. SWEDISH and RUSSIAN IRONS.

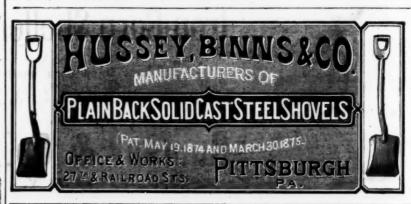
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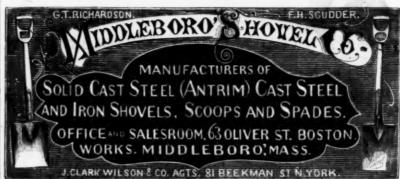


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It Has More Good Points, Less Complication, More Adaptability, Larger Capacity, Does More and Better Work, Takes Less Power, Costs less for Repairs

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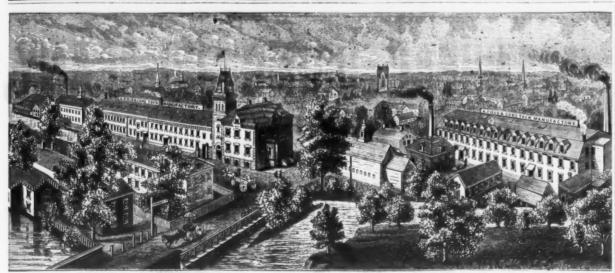
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Fine Two Penny & Three Penny Nails, Channel, Cigar Box & Chair Nails, Leathered Carpet Tacks, Glaziers' Points, Etc. OFFICES AND FACTORIES AT TAUNTON, MASS. WAREHOUSE AT 78 CHAMBERS STREET, N. Y., where may be found a full assortment of Tacks, Brads, &c., for the accommodation of the New York Wholesale and Jobbing Trade.

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Of various kinds. Clark's Shutters are the Best and Cheapest in the world. Are fitted to new Tribume Building. Lenox Library, Delaware and Hudson Canal Co.'s Building, Transatiantic Steamship Co.'s new Dock, American News Office, &c., Posey County, Oregon, Mo. Also to buildings in Boaton, Concinnait, Detroit, Janesville, Wis., Baltimore, Canada, &c. Have been for years in daily use in every principal city throughout Europe, and are indorsed by the Leading Architects of the World.

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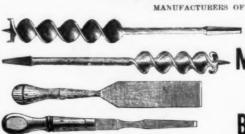


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a SPURIOUS PAINT, under an imitation name,
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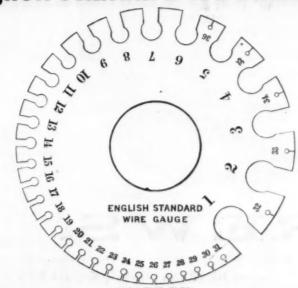
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The Ansonia Corrugated Stove Platform, the its heavy figured ogee border, is believed be the best Platform offered to the trade, a shown in the illustrated section herewith it quires no nailing to keep it in place or to event it from turning up at the edge; while e metal is of sufficient thickness to require things.

no lining.
The low price, super or quality and fine
finish of this Platform will be readily acknowledged. Packed 100 in a case.
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Rolling Wood Shutters English Standard Wire Gauges



MADE BY

The Processes of Steel Manufacture.

The manufacture of steel by a process as simple as possible, at the lowest cost and of the best quality, has called forth, especially of late years, the exercise of much inventive ability on the part of both chemists and engineers, both t home and abroad. There has resulted such a variety of differing methods that some systematic classification of the processes has become ery necessary. In the Mittheilungen des Hanrischen Gewerbe-Vereines, Professor Heeten publishes the complete classification, a translaon of which is given below, and which will e found both instructive and of value for puroses of reference. A steel occupies nearly the piddle place between cast and wrought iron in s proportion of carbon, it may be prepared either by decarburizing pig iron, or, on the con rary, by causing wrought iron to absorb car-The processes to accomplish these ends nay be arranged under five principal heads : A, Fabrication of steel by decarburization of crude or pig iron; B, by carburization of wrought on; C, by mixing a wrought iron poor in carbon with a pig iron rich in same; D, by mixing oig iron with ore (the pig yields carbon which duces the ore and transforms the reduced ron into steel); E, directly by means of ore; F, cast steel. Subdividing these systems, we ave the following methods under each head-

A .- METHODS BY DECARBURIZING THE CRUDE IRON.

1. Steel obtained by a long heating of the crude iron in an oxidizing atmosphere, the metal not being brought to fusion. (a) Turer's method in sand, where the deoxidation is produced by means of the oxygen in the air. (b) Jullien's method, in forge scales or spathic ore. This produces malleable iron. (c) Herzeele's method in steam. (d) Thomas' method in carbonic acid. The last two processes have not been employed to any great extent.

2. Natural steel: In this method, employed since the earliest times, the crude fron is melted in a refining furnace with wood charcoal, and decarburized by the ferrous oxide of the scorla. The product is purified by a repeated refining.

8. Puddling: This process is the same as the preceding, from a chemical point of view, but s practiced in a reverberatory furnace heated with coal. It is necessary to purify the product by repeated refining or by transforming it into

The construction of puddling furnaces has undergone many changes. We may distinguish (a) the ordinary puddling furnace with fixed hearth and heated by coal (b), the same heated by lignite or peat (c), the puddling fur aces of Schafbautl and others, with mechanical abbles designed to diminish the labor so fatiguing to the workman. These, however, have been entirely superseded by the new systems. (d) The Danks furnace, the hearth of which is formed of a hollow cylinder placed norizontally, and turning about its axis. It gives a product of excellent quality, and is onomical. The interior lining, however, is difficult to maintain. (e) The Ehrenworth furnace has a horizontal circular hearth turning about a vertical axis. (f) The Pernot furnace also has a circular sole, which, however, is not horizontal, but slightly inclined, so that during its rotation the iron and scoriæ run to the lowest point, and are thus in a state of continual motion; while the elevated parts of the hearth, together with the iron and scorize thereto adherent, are submitted to the oxidizing action of the air. Professor Heeren thinks this furnace to be best, because it realizes the advantages of mechanical puddling without needing any special lining.

4. The Bessemer process: A current of air, finely divided is passed through the liquid crude iron. The carbon, silicon and a part of the iron burn, and the temperature is so highly elevated that the iron, decarburized in part or transformed into steel, remains molten. It is then run into molds.

5. Berard's modification of the above : Air and gases are alternately introduced into the retort with different advantages.

6. Peter's process: The liquefied crude iron in a reverberatory furnace falls in the form of rain in a vertical chamber in which the furnace gases also pass, and in which air is blown so as to decarburize the metal to the desired degree.

1. Indian or Wootz steel: Wrought iron of extraordinary purity, obtained by treating a very pure ore in small chamber furnaces by the direct method, is hammered, made into bars. cut into short pieces and placed in small crucibles with a few green leaves. The crucibles are hermetically sealed and heated for a long time at a high temperature. The iron is transformed into steel by uniting with it this carbon contained in the leaves, and the steel even partially melts. These half melted masses furnish the famous sword blades and plates of Persia and

2. There are several other processes resembing the Indian, which, however, are not carried on on a large scale. There are (a) the Mushe process, in which wrought irou obtained by the ordinary refining method is melted with pow dered wood charcoal. (b) The Vickers' process, analogous to the preceding, with the addition of oxide of manganese. (c) The Stour bridge, Brooman, Thomas and Binks processes, based on identical principles.

3. English cemented steel: Wrought iron of the best possible quality is, in the shape of which by remelting is transformed into cast

DARLING, BROWN & SHARPE, Providence, R. I. consumption of coke or wood charcoal, may be

transformed into steel or even into cast iron acording to the length of the operation. system offers an advantageous method of utiliz ng scrap, and requires no special apparatus,

Chenot's process: In this the ore is reduced by heating it progressively with coal. A non-melted iron sponge is obtained, which is ground and separated as well as possible from the gangues by the aid of a magnet. Lastly, it is mixed with carboniferous substances, and melted under pressure. The principal disadvantage of this process is the difficulty of eparating the gangues without losing the

6. Case-hardening has for its object the transformation of the surfaces of wrought iron objects into steel. It is done in two ways. (a) The pieces are placed in small sheet iron oxes and surrounded with chips of wood. The boxes are hermetically closed and heated in a forge fire for 15 or 30 minutes, to an intense red heat. They are then removed quickly, opened, and their contents thrown into cold water, whereby the exterior steel shell is rendered as hard as glass. (b) The pieces are heated to a whitish red and moistened with ferrocyan ide of potassium, which acts by its cyanogen on the iron, and transforms the surface into

C .- METHODS BY FUSION OF A MIXTURE OF CAST AND WROUGHT IRON.

The two materials may be both, or only one of them, used in a melted state

1. Bessemer steel, prepared by the ordinary method: The crude and wrought iron here are both liquid, while, as we have previously said, cast iron may be directly transformed into steel. The method most followed, and which leads most surely to the end in view, consists in completely decarburizing the crude iron in the converter, and in adding to the melted metallic fron, a rigorously determined quantity of liquid crude Iron. The carbon of the latter affects the previously decarburized iron, and makes a steel containing a given proportion of carbon

2. Crucible steel is obtained by melting in crucibles a mixture of crude and wrought iron. The former liquefies first and slowly melts the

3. Martin's steel is similarly made, by replacing the crucible with a reverberatory furnace. The crude iron is liquefied under a thin layer of scoria on the concave hearth of a reverberatory furnace, heated to an intense red-white heat by a Siemens regenerator. Scraps of steel and wrought iron of all kinds in desired quantity are added, and the steel is run into molds

D,-METHODS BY A MIXTURE OF CAST IRON AND ORE.

Uchatins steel: The cast iron is granulated by running it into water while molten, and the grains are melted with spathic ore, peroxide of manganese, and wrought iron in crucibles. The ferrous oxide of the spathic ore is reduced by the carbon of the cast iron, and the surplus of carbon unites with the wrought iron to make steel.

E .- METHODS BY PREPARATION DIRECT FROM THE ORE.

The Siemens direct process: The ore is nelted alone, without addition of reducing material, at a very elevated temperature; then the iron is reduced and transformed into wrought iron or into steel by adding coal.

F.-CAST STEEL. For the purification of steel by fusion, cemented, forged and puddled steel are employed. To improve the qualities of the steel, and notably to augment its bardness, diverse substances are added. Thus we have: 1, silver steel; 2, nickel steel, and 3, wolfram or Mushet special steel.

Earnings of the Suez Canal.

The financial report of the Suez Canal makes the following showing of traffic and receipts from all sources from the 1st of Deccember,

1909, 1	ip to the sist of De	cember, 1	919;
No. of		Taxable	Receipts in
Ves'ls.	Flag.	Tonnage.	francs.
1,347	British	6,276,070	76,723,970 83
478	French	903,605	10,747,982-52
345	Austrian		4,463,853 24
168	Dutch	277,466	3,631,428 13
292 -	Italian	254,315	3,104,353.71
82	Spanish	115,148	1,502,187.00
140	Ottoman	99,819	1,482,704 02
118	German		1,397 526 84
118	Egyptian	79,012	1,027,755:11
48	Russian	61,926	769,676 68
30	Norwegian	39,337	501,398 64
26	Danish	23,590	314,770-96
92	Swedish	18,745	246,761.6
94	Portuguese	17,399	
10	American	13,643	143,829:00
27	Belg'n, Japn'se, Gre and all others		222,494.00
6.975		8.653.442	106.506.374:91

Imposts on barges, passengers, &c Total in francs.. 108,257,362-23 It is noticeable that while the receipts have

reached the imposing aggregate given above, they have been rapidly increasing of late years, until now dividends of from 5 to 61/4 per cent. have become practicable. The original share capital was £8,000,000, and the following statement is given of the total receipts, expenditures, and net earnings of the last three years:

u t	Receipts £991,000	£1,056,000	£1,283,000
	Expenditures 225,000	248,000	248,000
7-	Net earnings £766,000	£808,000	£985,000
	1873.	1874.	1875.
)- -	Proportion of net to gross income77 p. c.	75 p. c.	80 p. c.
r-			

The Boston Journal of Commerce says : In ventors and others will rejoice to know that the Commissioner of Patents at Washington has received a communication from the Combars, packed together in clay boxes, together missioner of Patents of Great Britain, informwith wood charcoal coarsely pulverized. The ing him that by an act of Parliament foreigners heating continues for two or three weeks. have been accorded the privilege of registering Without melting the iron is changed into steel, trade-marks in that country upon the same terms as British subjects. The Patent Office at steel.

4. Parry's cupola steel: Fragments of wrought iron, metted in the cupola with a large consumption of coke or wood charcoal, may be

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FACTORIES, - - - NEW BRITAIN, CONNECTICUT, U. S. A.

MANUFACTURERS' AGENTS AND JOBBERS OF GENERAL HARDWARE AT OUR

WAREHOUSES: NEW YORK, 45 & 47 Chambers St.; PHILADELPHIA, 425 Market St.; SOUTHERN DEPARTMENT, BALTIMORE, MD., WM. H. COLE, Agent, 17 S. Charles St.

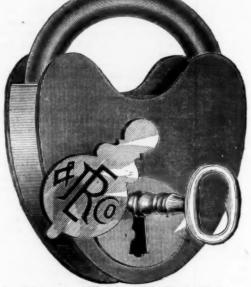


No. 313, 21/2 in., 3 Tumblers and Bridge Ward, Spring Shackle and Drop.

PADLOCKS No. 1313, 2½ in., 3 Tumblers and Bridge Ward, Spring Shackle and Drop, Nickel Plated Steel Keys.

with IRON KEYS, and with NICKEL PLATED PATENT STEEL KEYS.

We shall in January next issue a list, showing all our styles of these goods, which will include a number of New and Desirable patterns.



No. 206, 21/2 in., 2 Wheel and Side Wards, 12 changes



No. 1212, 31/4 in., 12 changes, Nickel Plated Steel Keys.



No. 1206, 2½ in., 12 changes, Nickel Plated Steel Keys



No. 5000, 2 in., Spring Shack





No. 1000, 2 in., Nickel Plated Steel Keys

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MERIDEN CUTLERY CO. Received the HIGHEST CENTENNIAL PRIZE.



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The only Knives made that are put together in such a manner that there is no strain on the coving or frail part of the knife. We warrant our knives equal in cutting qualities and workmanship to any is, and are acknowledged by English makers as the **Best American Knife**. We also make

NICKEL & SILVER PLATED POCKET KNIVES not rust or become discolored when used as a Fruit Knife, and their cutting qualities are equal er knife. Orders filled from the factory, and in New York by **Messrs. J. Clark Wilson** No. 81 Beckman Street (who have a full stock of all patterns always on hand), and also by G. B. Walbridge & Co., No. 99 Chambers Street.

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shington Works, Sheffleld,

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BUSINESS ITEMS.

MASSACHUSETTS.

The Richmond Iron Company's Furnace, at Van Deusenville, is running out of charcoal, and closes in about a fortnight, after a blast of over a year, with a short rest during low water. The three furnaces of this company will then be idle, with no immediate prospects of starting up, as they have something like 10,000 tons of iron piled up.

Taylor, Church & Coffing, Lenox, have been waiting some time for water enough to begin work at their iron furnace. They have a large quantity of charcoal on hand which has to be kept heavily insured, but the prospect of the trade does not warrant them in burning more

Robert Squires, a pot maker for the Lenox Glass Company, has fitted up a building near the large works with furnace and oven for making window glass by the English method, and hopes to get started in two or three weeks.

The Miller's Falls Company are having busy imes at the factory this month, the principal articles of manufacture at this season being toy cannon and frames for bracket saws.

CONNECTICUT.

The strike at the Knife Works, in Northfield, is ended, the strikers having accepted the five per cent, reduction. They have lost in wages about \$4000 during the strike.

The Turkish government has ordered 2,000, 000 more cartridges from the Union Metallic Cartridge Company, of this city.-Bridgeport

Colt's Armory, at Hartford, has just received an order for 30,000 cheap pistols, and a coniderable number of new workmen have been

The Derby Silver Company, of Shelton, are now very busy turning out plated work.

A foundry is about to be started in Norwalk y N. L. Austin, of Weston.

Factories at Bristol are running as follows E. Ingraham & Co.'s Clock Factory, 9 hours ; J. H. Sessions & Son's Trunk, Hardware and Clock Factory, 8 hours.

Pioneer Furnace No. 1, at Pottsville, has re umed operations.

The Boiler Works of Pott & Bro., at Lebanon, are full of work, and the prospects are good.

The second stack of the Lehigh Valley Iron Works, at Coplay, is being filled, preparatory to blowing in.

The blooming mill at the Pennsylvania Steel Works, Baldwin, has resumed operations, with a large reduction of hands, in consequence of the new labor-saving hydraulic apparatus to be used hereafter.

The Williamstown Colliery, located forty miles north of Harrisburg, it is claimed, ships more coal to market than any colliery in the county. Last year it worked steadily through the whole year, and produced 298,878 tons

Mt. Hope Furnace, Lebanon county, is turn ing out forty tons of iron per week.

E. & G. Brooke, of Birdsboro, are putting in twelve more nail machines, and preparing to put another furnace in blast.

We have already mentioned the sale of the Marden Creek Iron Works for the sum of \$21,000. The charcoal furnace connected with the property, situated at Lenhartsville, 19 miles north of Reading, will probably be put in blast the first of the year.

The Pennsylvania Iron Works, Danville, which started up some weeks ago with good prospects of running all winter was idle week before last.

The rolling mills at Sharon pay monthly ow instead of every two weeks as heretofore. The Grove Furnace, at Danville, has been blown in successfully.

The Gavit Machine Works, Philadelphia, have ecently received an order for 160 chilled rolls for one firm in England, and made the first

shipment about ten days ago. on double turn on Tuesday, last week. Twentyone boiling and five heating furnaces give to that end of the city a business-like appear-

The sheet mill of Bradley, Reis & Co., Newcastle, still continues to be pressed with orders. The Warwick Furnace, which was " sick " for

The Warwick Furnace, which was "sick" for a while, is now running satisfactorily on first quality of iron, making some 38 to 40 tons per day.

Matilda Furnace, Mifflin county, put out her fires on Sunday night, the 5th inst., and suspended operatiors, the proprietor, Mr. Sackett, being compelled to succumb to the stringency of the times. A number of persons have been thrown ont of employment in consequence. thrown out of employment in consequence.

The new furnace at Birdsboro is nearly ready to go into operation. W. Nimson, of the Allentown Rolling

Mill, is superintending the putting into blast of Kutztown's Furnace.

WEST VIRGINIA.

The Arlington Stove Works, Wheeling, which have been idle for some time, started up last Thursday.

The Youngstown Register and Tribune says : The iron business in this city is about holding its own, there being no perceptible change to report. The Youngstown Rolling Mill and Cartwright, McCurdy & Co. to start the Enterprise Mill this week. There is nothing dis-

Furnace will fire up to-day. The mill is still in operation. The Lawrence Mill is watching and waiting for orders. Lambert & Gordon have completed their contract on the Dunbar Furnace. Belfont Furnace is working better than Week before last it made 315 tons; last week, 311 tons. This week it is running on fivesixths coke and will make 350 tons.

The Alice Furnace, Ironton, having been stopped for want of coke was to resume her blast this week. She will commence using a small amount of Sheridan with Pittsburgh coke, and increase the charges of the former until its purity will have been thoroughly tested. It is hoped by the parties concerned, as well as by outsiders, that this practical experiment will prove a success, as it would cause the establishment of extensive coke manufacturing works at Sheridan (3 miles above Ironton), which would be able to furnish the iron works of the Hanging Rock district with coke, regardless of the low river-contingencles which at present render the Pittsburgh market somewhat problematic for us.

TENNESSEE.

A Tennessee paper says: "The Southern States Coal, and Iron Company are steadily pushing forward their various enterprises at South Pittsburgh. Everything is being done with a view to permanency. The company have already commenced the building of South Pittsburgh, which in the future is to play a conspicuous part as one of the great industrial centers of Tennessee. The grading of the streets is now in progress, and a large sewer is being constructed which will drain the entire town. Foundries have been established and put in operation, and these will furnish all the patterns to be used in the business. Two foundations for furnaces are now being excavated. The company make their own brick, with the help of machines. From the brickyard numerous tracks radiate, by means of which brick are rapidly conveyed in cars and laid under the shed some distance off. In the same expeditious way they are conveyed to the kilns and burned. The company will have a machine to grind and wash coal of all its im-Knob Factory, 8 hours; S. E. Root's Dial and purities before burning it into coke. The extension of the Jusper Branch Railroad, eight miles up the Sequatchie Valley, was commenced recently and will be completed by the first of next April. Five coal mines will be opened along this extension. The Vicoria mines will, however, be depended upon for a permanen supply. One hundred and eighty hands aret now employed in getting out coal at this point for Nashville and Southern points, as soon as the extension is completed. About 200 persons are at present employed in all the departments at South Pittsburgh."

WISCONSIN.

The Appleton Blast Furnace is again in blast under an arrangement entered into for the benefit of the creditors of the concern. It is reported to be making a very superior grade of iron, with prospects of ultimately wiping out all its indebtedness.

Under the order of the court the provisional assignees of the Milwaukee Iron Company are selling the bills receivable that have come into their possession, which are not yet due, to pay for the iron ore, etc., lately ordered by them to keep one furnace at work in order to use up the raw material on hand.

MICHIGAN.

The following, from the Marquette Mining Journal, are the total shipments from the Lake Superior district this season, up to and including Wednesday, Nov. 15, together with the shipments for a corresponding period last year. except one week of Escanaba in each year omitted:

From Where. 450,560 346,002 85,785 .766,623889,347 Showing an increase of 115,724 gross tons.

The Wyandotte Rolling Mill Company are re-working a quantity of odd sizes and unsalable merchant iron, some of which has been lying The Etna Rolling Mill, Newcastle, started in in the warehouse at Detroit for more than 20 There is some bitch in the renewal of opera-

tions at the Escanaba Furnace-a Pittsburgh injunction, or something of that sort. The Menominee Furnace is doing good work, turning out an average weekly make of about

20 tons, two-thirds of the chi

period last year : From Where.
From Marquette....
Escanaba.... 1875. 1876. 453,508 457,373 349,753 368,971 70,003 88,962 " L'Anse

.778,259 915,306 Showing an increase of 187,047 gross tons. KENTUCKY. Boone Furnace and lands were offered at pub-lic sale at Covington on the 22d. Pennsylvania Furnace blew out last Satur-

lay.

Bellefonte Furnace will make another small blast next year.

Hunnewell Furnsce will cut audroal some

15,000 cords of wood at Hopewell Station, and some 2000 or 3000 near the furnace, paying 30 cents per cord in goods. The Wurtland Coal Works continue their

Brown, Bonnell & Co.'s Works are running operations with renewed vigor, having increased their output to 20,000 bushels per week, and are not yet able to fill orders as fast as they come in.

The Norton Works are shipping 2500 tons of

couraging in the general outlook.

The sub-contractors at Brown, Bonnell & Co.'s Rolling Mill have reduced their day laborers ten per cent.

We take the following from the Ironton Register of last week: The Belfont Nail Mill started up last Monday, and may run until Christmas. The Iron and Steel

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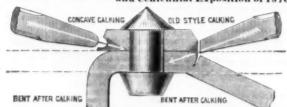
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changed very decidedly; but iron manufac-

ture is now, always was, and always will

be, subject to the natural laws of trade,

and the conditions of success are those

will be a long while before such times re-

turn, if they ever do. Iron making is

must watch the tunnel head as weil as the

furnace management is already giving

of the chemist, the calculation of the engi-

neer and the record of the testing machine.

Cheapness and excellence of product are,

as they always were, the conditions of suc-

termined by much stricter standards than

conditions changed. Again, iron always

advantage under conditions naturally fa-

vorable to economy-namely, where ores

and fuel are most abundant and of best

be employed to best advantage. It is pos-

and maintain great industries where there

able to them; but in the long runthe natu-

with concentrated capital and skilled labor,

terials is as important an item as it is in

claim for our own country advantages

compare. Great Britain, our chief com-

world's markets, cannot long retain such

land must mevitably increase, and there

sion of her iron industries. Perhaps that

and transportation facilities are concerned,

we can go on increasing our iron produc-

can make irons of better average quality

country.entitled to recognition as a com-

three years have shown that it is pos-

has been, and always will be, made to best and reduce them to special applications.

The Iron Age.

New York, Thursday, November 30, 1876.

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Germany	6	66				3	04				. 1	52
Buenos Ayres	8	16				4	08				. 2	04
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The Present and Future of the Iron Trade.

The following was telegraphed from London, under date of November 25th:

A memorandum furnished the Foreign Office by the president of the British Iron Trade Association states that a large proportion of the furnaces are out of blast, and a still larger proportion of the forges and mills for the production of malleable iron are closed. Thousands of workmen have been discharged, and the wages of those retained materially reduced. The distress is great at in the rail making districts of South Wales and the north of England, but is also very great in Staffordebire, the Midland counties and Scotland. The depression is not confined to England, but is felt on the Continent with almost equal severity. Germany A memorandum furnished the Foreign Office equal severity. German greatest sufferers. Franc-but even there prices ar then with almost equal severity. German and Belgium are the greatest sufferers. France not so badly off, but even there prices a extremely low, and the trade is evidently in critical and unsound condition.

The fact that the iron trade in all countries is simultaneously suffering from extreme depression is not so difficult of explanation as it might seem to one who has not watched the gradual workings of the causes by which the existing state of affairs has been brought about. We have so many times discussed in these columns the various aspects of the iron trade at home and abroad during the past four or five years, speculative demands of one year may, and

not be without interest, especially as they from? seem to rest upon a substantial basis of probability.

In all discussions of this kind it is im- ture as being "changed," but the phase, portant to bear in mind the fact that iron while true in one sense, is likely to misis likely to remain, for an indefinite period lead. As compared with those which obof the future, a prime element of civiliza- tained in 1870, for example, they have tion. The age of the world's progress upon which its name is stamped began when the bronze age ended, and will continue until we shall have a metal available for general employment in the arts which can be substituted for iron with advantage. The economical production of steel in large masses will undoubtedly extend the use of profit under conditions unfavorable to iron in one form or another, but the steel age of the pseudo-prophets will be, after all, the iron age indefinitely prolonged. We may, consequently, expect a steady increase in the average annual consumption of iron in the innumerable uses for which it is now employed, and in the new uses every day suggested, in which it is replacing more costly and less convenient place to a system based upon the analyses materials. It cannot be expected, however, that this increase of consumption will be uniform from year to year. Experience has repeatedly shown that progress, even in the very practical nineteenth cess in iron making; but cheapness and century, is fitful and uncertain. Countless excellence, always relative terms, are decauses are at work all the time to stimulate or retard progress. Sometimes war stimulates enterprise-sometimes it paralyzes it. The numberless influences operating to affect the volume and profit of the world's exchanges, strengthen or weaken the confidence of capital in investments by which the development of the world's resources quality, and where labor is cheapest or can is furthered. Six or seven years ago it seemed as if civilization was advancing sible, under some circumstances, to plant with strides unparalleled in the history of nations. The thrill of a new life was felt are no natural advantages peculiarly favorin every country yet drawn within the busy circle of the world's activities and ral advantages win in the competition industries, and in many parts of the world which had hitherto contributed nothing to especially when transportation of raw mameet the increasing demands of trade, the rofitable investment. Railroads were exended almost recklessly and, in some cases, in anticipation of the requirements were undertaken and consummated, and greater ones were proposed, until the engineer and capitalist seemed ready to venture any undertaking which might be suggested, however ambitious; production was stimulated, the volume of the world's other countries. The cost of iron in Eng-available lead. exchanges swelled to unprecedented proportions, values increased, wages ad- are definite limits to the possible expanvanced, and mankind seemed to have gencondition. We all remember the impetus doubtful if any great expansion is probaimparted to iron manufacture by this gen- ble in the future. With us the case is very eral progress. Production was increased different. We have scarcely begun to deto the limit of capacity; stocks were reduced to a point which threatened famine; new facilities of manufacture could not be provided fast enough, and the price of iron | tion to any extent which the world's rethe easy investment of a great deal of capinever have been built, and which now remember how the excitement died out; how one great project after another was abandoned or postponed; how trade fell degree proportionate to the market off; how the world's progress seemed to price of the metal, even under a slacken and almost to stop; how it was protective tariff. Our "hot-house" inraited for a new impetus which has not by our own. come. All these are matters within the experiences of the novice in business, and there is nothing very wonderful or surprising in the succession of happenings we have noted. It is only one of the selfrepetitions of history, and another generation will see like results produced by the same, or perhaps from widely different, causes. But the world will continue to revolve; its fitful progress will maintain its normal statistical average, and we may take it for granted that the world's requirements of iron in 1885 will bear about the

same relation to its requirements in 1875,

as those of 1875 bore to those of 1865.

What we now regard as wild schemes,

practicable only because possible, may be-

come commercial necessities ten or twenty

years hence; and we shall then look at

many things from a very different stand-

point from that which it is possible to

occupy at this time. It is in no respect

probable that the world's iron production

of 13,000,000 tons, rore or less, in 1874,

will bear any close relation to the world's

needs in 1884, than its production in 1864

bears to its wants to-day. Certainly we are

but little if any nearer now than then, to

producing a supply which shall be ad-

equate to future requirements. The world

must have iron in increasing quanties, the

promise for the iron industries of the United States. No artificial advantages can permanently offset those of unlimited relieve that the bulk of the world's future requirements will be supplied by us. How soon another impulse of progress will quicken the world and stimulate the enterprise which develops continents and opens channels for commerce, we cannot say, but it is important that we should put ourvantage of our improved demand when it comes. We must solicit the world's trade if we want it, and our only hope of getmanufactures of iron than can be our ability to meet these conditions, but they cannot be met without an effort. For many years to come the margin of profit on iron will be small, and the hope of making iron profitably in small, badly designed or badly located furnaces might as well be given up now as later. Out of our 650 stacks, more or less, it is and 1866. probably that not more than 400 are worth

ground already gone over in previous ar- consumptive requirements of another, and be told on one's fingers. If anyone our own market. Speculators would imticles; but a few speculations concerning the supply of iron must not only be main. doubts this statement, we refer him to Mr. mediately resume operations for the conthe future of the world's iron trade may tained but increased. Where will it come Baker's table, showing the average cost of trol of the metal; even in normal times we the conditions of success in iron manufacfurnaces well located. The same is true which have always existed, except in brief of our mills to some degree, although it is probable that a larger proportion of mills seasons when high prices and a speculative demand rendered it possible to win a than of furnaces are able to reduce the cost of production to the minimum average. We may feel a tender and even a cheapness or excellence of product. It sentimental regard for our old furnaces of small capacity and insufficient blast, around which cluster so many interesting hisceasing to be a business, and is becoming torical memories, and which were once rea science. The ironmaster finds that he garded by their owners with so much pride, but we cannot afford to waste fuel or time tap hole, and the rule-of-thumb system of making irou in them. So far as they are concerned, the conditions of success in iron manufacture are changed forever. To hold our own and realize what may be considered the possibilities of the not remote future, we must depend upon improved plant and upon processes which secure the ultimate attainable economy. These remarks may seem like generalities -and so they are. The ironmaster must formerly, and in this respect only are the argue for himself from such generalities,

The Lead Markets.

In Europe the lead markets have become more active during the past month or two than at any previous time since the commencement of the year. Although the Eastern question was resuscitated early in the spring, actual warfare promised to be confined to Turkey and her revolted provinces, and lead remained uninfluenced. The aspect has radically changed since, and the theater of war, after a short suspension of hostilties, may be vastly excapital of other countries was seeking iron manufacture. In this respect we can tended. Russia, it was supposed, had long ago completed her purchases of lead with which those of no other country can for the army, but amounts recently secured for that government at Marseilles of commerce; great engineering works petitor in the manufacture of iron for the prove the contrary. Italy has also appeared in the same market, and in Central advantage as she has hitherto derived from and Western Europe the quantities recentcheap capital and superior furnaces. Her ly secured for various other governments coal resources are limited and her native now arming have been sufficiently large to ores must be supplemented with those of absorb pretty much all immediately

For industrial purposes, lead in Europe as well as here generally enters upon its dullest period with the advent of the winerally and almost suddenly bettered its limit has not yet been reached, but it is ter months; but for this circumstance the metal, in view of the steady war demand. would have been pushed to a much higher figure on the other side than it has thus far velop our resources and, so far as coal, ores attained. The advance over there has been about 10 per cent. from the lowest previous point of the year, which is nothing extraordinary. Should the spring rapidly advanced to figures which induced quirements may demand. Moreover, we trade be but half way what is expected of it in Europe, and a lively demand for intal in mills and furnaces which should than are produced on a large scale in any dustrial purposes be added to the government requirements, we should not be surhave no good excuse for being. We all petitor, and the experiences of the past prised to see lead advance another 10 per cent., even admitting that England and sible to make the cost of iron in some Spain are likely to turn out considerably more lead this year than they produced in

In England, lead is now about the only suddenly discovered that, with a produc- dustry has shown a wonderful hardihood metal produced from native ores which is tive capacity adjusted on the basis of a in times of general depression, and we really profitable throughout, hence lead speculative and temporary demand, iron doubt if the effect of low prices and a production has been greatly stimulated in became a burden in the world's markets, restricted demand have not been even more that country, but it will nevertheless be an and how for three or four years we have severely felt by British ironmasters than unusual gain for a single twelve months, if the English mines can add this year However regarded, the future is full of 10,000 tons to their usual annual output.

> In Spain, where lead mining is even more remunerative than in the former country, the resources are greater, and ources conveniently located, and we be- now that the Peninsula is handed back to a normal condition, the excess over previous years' average may be safely put down at 15,000 tons. The remaining countries of Europe we estimate at their usual yield. To the normal European output of 253,500 tons we may therefore, without fear of exaggeration, add 25,000 tons, and selves in a position to take the utmost ad- Europe will then have turned out 278,500 tons during the current year, or 10 per cent. more than hitherto. But the war demand has been so steady since summer that the excess we have named has not only been absorbed, but probably as much beside. The improvement, in which speculation has had no hand, is therefore ting it is by offering better or cheaper that the excess we have named has not had elsewhere. No one will question beside. The improvement, in which speculation has had no hand, is therefore easily explained. Should the war break railway machinery; and the most strange fact

maintaining. The rest belong to a past ent upon the European lead markets, inas-

that it is unnecessary to traverse again the indeed must, fall short of the legitimate ations of the market without loss could there would of course not fail to influence anthracite pig iron on furnace bank in have had a movement of the kind year Pennsylvania from 1850 to 1875, and sug- after year when the price here was much gest a comparison of his totals with the higher than at present. At all events, the average market price of iron in those decline of 17 per cent, in this market has years. Mr. Baker has been somewhat at length been arrested; the metal, though severely criticized for making his items of quiet, is now firm, and it would require cost too small; but no one has claimed but a slight impulse of reviving activity, that they were too large, or that his totals be the same for consumption or speculawere above the average cost of iron to tion, to produce an immediate rebound, makers owning what are considered good even in the face of the otherwise languid winter season.

> Our English contemporary, Iron, is republishing a series of artices on puddling that is running through an American paper, but has altered the heading to "Puddling 'as practiced in America," and says in a foot note: "As the writer is well known 'in the United States as the author of a 'trustworthy and useful work on pud-'dling, etc." The author of the articles in question is an Englishman. His work "On Puddling" was published in England some ten years ago, and has never been republished in this country, and his knowledge of puddling in this country must be very slight. While the articles may be valuable, it is hardly fair to regard them as the exponent of "puddling as practiced in America."

A Basis of Future Prosperity for our Iron and Steel Industries.

We have received from a well known iron manufacturer the following communication, which will be read with interest. As will be seen, it is in some respects in harmony with the views we have expressed from time to time respecting the future of our iron industries-and, indeed, with the leading editorial of this issue, which was written before this communication was received. It is, however, pitched in a somewhat higher key, and ventures certain predictions which we fear will be regarded as doubtful prophesies. The writer believes that we are nearing the time when a great export trade in iron will be possible for us. So far we agree with him, for reasons set forth at some length in the article above referred to. He thinks further that the foreign demand will be for mild steels first, then for wrought iron, and finally for pig iron. This may be so, and it may finally for pig iron. This may be so, and it may not. For our own part we think the demands of foreign markets will for a long time be confined to manufactures of iron and steel. If we have any advantages over foreign competitors which are great enough to secure us an export demand, they consist chiefly in our better machinery and cheaper processes of working raw materials we must long find a market at home, but for the manufactures into which they enter the markets of the world are open. Of course, we cannot produce cheap and excellent manufactures diron and steel unless we have cheap and excellent iron and seel, but that the world will soon call for these metals in large quantities does not seem to us probable. For this there are two reasons. One is that we can manufacture iron and steel into useful forms cheaper and better than it can be done abroad, and the other is that we shall experience a very much sharper competition in seeking a market for steel in ingots and iron in pigs or bars than in the countless forms into which, with our improved machinery and ingerious processes, we can manufacture it. We shall certainly find a trade in manufactures more profitable than one in raw materials, and shall consequently make a greater effort to develop it. We may be mistaken, but our views seem to us more in accordance with the probabilities of the future than those of our correspondent, whose letter we give below:

To the Editor of The Iron Age: Many have been the inquires as to whether we have reached the

we give below:

To the Editor of The Iron Age: Many have been the inquires as to whether we have reached the bottom of prices in iron and steel in this conntry. Wise men predicted \$30 as the bottom on pig iron, but it went lower, and wiser men stocked largely at \$25, believing that to be the bottom. But without any regard to cost the price fell lower and lower, until the average price at the furnaces is now below \$30. The anxions inquiry comes oftener and more earnest, Have we yet touched bottom? Having my all of worldly goods at stake on the future of iron, I have with anxious search scanned the whole field to find some reasonable ground to predict a change for the better, but ground to predict a change for the better, but as yet I find nothing. It is true that the effect of a European war would temporarily advance prices, but only to drop still lower on the return of peace. It is also probable that some local cause might stay the downward tendency toward the bottom, and thus for a short time afford better prices, but I apprehend that such a state could last but for a few years at most.

The deposits of iron ores, coal and limestone in the United States are of such superior richness and such immense magnitude.

in the United States are of such superior richness and such immense magnitude, as to exceed by far the resources of any other country, and the rapid advance made by American manufacturers as exhibited at the Centennial Exposition, has so astonished the manufacturers of iron and steel in England as to draw from their most able men the acknowledgement that "the United States are now almost ready to compete with England for the mastery of the export iron trade of the world." Is this true? If so, it will prove the rock bottom to the iron and steel trades of the United States.

articles of hardware; sewing machines and musical instruments, and all kinds of shop and easily explained. Should the war break out again, and bring into the arena one or more of the arbiters of Europe, speculation would not remain dormant, and we should in all likelihood witness a rise in the metal, reminding us of the years 1870 and 1866.

Although we are not in the least dependance of the would in the metal in the most strange fact is, that without ambition on our part for the foreigners have brought their orders to our doors. Does this not indicate that we are at the threshold of an export trade for iron and till be exported first, who will most likely be exported first, who will be such as show the highest degree of skill. I predict that steel will be exported first, who will be a such as show the highest degree of skill. I predict that steel will be exported first, who will be a such as show the highest degree of skill. I predict that steel will be exported first, where the most strange fact is, that without ambition on our part for a foreign market, these foreigners have brought their orders to our doors. Does this not indicate that we are at the threshold of an export trade for iron and steel? If so, the question arises, what will most likely be exported first. I answer that the first metallic goods exported will be such as show the highest degree of skill. I predict that steel will be exported first, where the first metallic goods exported first, where the first metallic goods exported first, which is the first metallic goods exported first, where the first metallic goods exported first, where the first metallic goods exported first, where the first metallic goods exported first where the first met

fron.

The nearness of England's mines to ocean era, and no great proportion of them are worth remodelling. Of these 400 furnaces, the number which can meet all the fluctutrope, any very extraordinary rise over and steel, and by continued prosperity she be came so conservative as to forget that in the onward march of civilization the coming age demanded more perfect tools and better goods than those which satisfied the past. England has been content with the methods, processes and tools of the last generation, while we, on this side of the ocean, with ingenious devices have economized labor, and perfected our products to such a degree as to cause foreigners to come to our shops and buy with gold at our prices. Our market for metal goods is not only in South America but also lirgely in England and other European countries. As I said before, England is smazed, and some of her leading men have already expressed a fear that her path in the future, so far as iron and steel is concerned, is "over the hill to the poor house."

The more intelligent men become the more readily they perceive that the best goods are

The more intelligent men become the more readily they perceive that the best goods are the cheapest at their relative cost, and the demand is already pushing the works for mild steels, to fill orders where iron was formerly used. On this class of metal the relative cost is probably less between England and the United Stytes than on bar Iron. Consequently I apprehend that our leading article in this line will be low steel. Once fairly started, this trade will probably increase to such an extent as to make steel a rival of cotton and wheat in commercial importance.

To secure an export trade for our steel we must not look for high prices, but steadily press forward in perfecting our plant and improving our processes so as to reduce the cost and make the goods more uniformly perfect. In all this we shall steadily gain on England, and when once the balance is fairly in our lavo; the manufacturers of from and steel in England will need a tariff for their protection.

In conclusion, we cannot expect sufficient railway demand before 1880 to utilize our present capacity of production, and new iron districts will before that time add considerable to the supply, so that I cannot conceive any cause which would be calculated to secure a high price for iron in the next four years, except war or some general internal improvement. Would it not then be a wise policy to look for the rock bottom in the export of Bessemer rails and mild temper steel?

Special Notices.

ASSIGNEE'S SALE. In the District Court of the United States for the

Southern District of New York, In the matter of Peter N. Burke and George W. McKee, Bankrupts.

In bankruptcy, No. 5516. Notice of *ale.

The undersigned hereby gives notice of the sale public auction on WEDNESDAY, THE 20th DAY OF DECEMBER, 1876, AT ONE O'CLOCK, IN THE AFTERNOON, THROUGH BURDETT & DENNIS, AUCTIONEERS, AT THE STORE, NO. 208 WATER STREET, IN THE CITY OF NEW YORK, formerly occupied by Burke & McKee, of the following described property, belonging to the estate in bankruptcy of said bankrupts, to wit: The stock on hand and undisposed of, consisting of STOVES, RANGES, HOLLOW-WARE, REPAIRS AND FITTINGS, in the line of goods heretofore dealt in by said firm; also, certain judgments, promissory notes, accounts, effects, debts and choses in action; ALSO, CERTAIN LETTERS PATENT OF THE UNITED STATES, FOR AN IMPROVED STOVE BRUSH, and a LOT OF STOVE BRUSHES ON HAND MADE UNDER THE SAME; together with the TOOLS, STORE FIXTURES and all other property in said store belonging to said bankrupts. Full particulars and catalogues can be obtained by applying to the undersigned.

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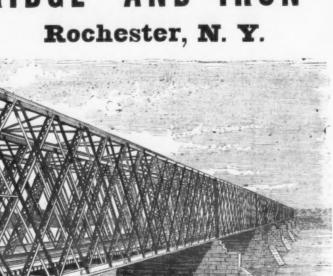
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A 16-inch log was sawed off in 17 seconds by hand with a Lightning Cross-Cut Saw, at Pennsylvania State Fair, on September 30th, 1874, before President Eby; W. B. Lawson, S. S. Hoagland, and other officers of the State Board, timing.

w. B. Lawson, S. S. Hoagand, and other olicers of the same board, things, \$\frac{1}{2}\$ \$1000 challenge to any responsible saw manufacturer, to match the Lightning Saws, in speed of cutting and ease of sharpening. This patent saw tooth has recently seen vindicated by U. S. Court decreeing cost and damages for infringements. Beware.

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JUDGES. PHILADELPHIA OFFICE, near Corliss Engine, Machinery Building, Centennial.

OSBORN BRIGHT METAL CAGES.

Also OSBORN & DRAYTON improvements under relive different patents. We are continually bringing

ALVAN DRAYTON, General Agent.

Cranes Bros. Mfg. Co COOKE & BEGGS, Agts

16 Cortlandt St., N. Y.

Ornamental Lanterns. KRAMER & BOLZ, 180 Grand St.,

Manufacturers of

Prosmental and Patent Iron Street and Station Lan-terns. This house was awarded the highest premium at the Centennial Exposition end for Illustrated Catalogue.

METALLIC SIEVES.



MANN'S PATENT. Best Sieve known; Clean, Neat and Durable. GRO. E. DAYTON, Manufacturer, Chicago. GRAHAM & HAINES, General Agents, New York.



The Ausable Nails

Are Hammered Hot,

And the Finishing and Pointing are Done Cold,

Thus Imitating the Process of Making Nails by Hand.

Quality is Fully Guaranteed.

For Sale by all Leading Iron and Hardware Houses.

ABRAHAM BUSSING, Secretary, 35 Chambers St., New York.



We now have on hand the largest stock of Skates in the country, consisting of a full line of self-adjusting all-clamp Skates, New York Club Skates of both the best and cheaper qualities, together with all desirable styles of Men's and Ladies' wood-top Skates. Also a large stock of Skate Straps, all of our manufacture, which are offered at prices to meet the times.

ILLUSTRATED CATALOGUE WITH PRICES, FURNISHED ON APPLICATION.

Horseshoes in History.

The St. Louis Commercial Gazette says: The date at which horses were first shod with metal has never been satisfactorily determined. Many have contended that passages in Homer prove that the art of shoeing horses was in practical use in his day, but others declare that the phrases supposed to indicate this are metaphorical. George Fleming, an English veterinary surgeon, has issued a volume in which all the evidences on the subject, from Xenophon down, are carefully collected and collated, so as to clearly exhibit both sides of the question. He makes it clear that the daring experiment of driving a nail into the foot of a horse was not ventured upon in classic times. There is no doubt, however, that different coverings were in use from a remote period, both in Greece and Italy, to protect the hoof when sore from travel, or when passing over rough roads, but there is much negative evidence that these were never generally adopted, and that they were awkward and clumsy in construction, and were only used from sheer necessity upon hard and stony ground, or in cases of

When we read that Poppæ or Commodus shod their horses with gold, it is evident that this must mean that some sort of sock or sanda was drawn over and fastened to the hoof, plated perhaps with metal on the sole. At Pompeii, Roman stables have been excavated, and in them have been discovered bones of horses and the very ring bolts to which they were tied up, but no trace of an iron shoe. There is nothing in ancient literature or relics to prove that Iron plates were attached to the hoofs of horses in Greece or Italy before the fall of the Western Empire. The first mention of "iron shoes and their nails" occurs in the "Tacita" of the Emperor Leo VI., where they are set down as among the articles requisite in the equipment of a calvary soldier. Leo VI. was reigning A. D. 900, and though horseshoes were, doubtless, in use before that time, this is the first known mention made of them. From the remains discovered in turnuli it has been well established that the Celtic nations used metal horseshoes fastened with nails at a much earlier date, which has been variously conjectured, and even placed by some before the

In view of the fact that most of the European Bessemer works call for pig iron containing at least two per cent. of silicon, Tunner calls attention to the fact that many Swedish furnaces produce Bessemer pigs with a basic mixture and comparatively cool blast, so as to contain not more than 1 per cent. silicon, the result being that it takes but 9 to 12 minutes to blow 60 to 80 cwt. of iron, whereas at least twice that period is required where more silicious irons are used. Tunner thinks more attention to this fact should be paid for the better qualities of steel, such as tool steel, since silicon makes the iron harder without imparting the tempering quality to it.

HIGHEST AWARD,

Centennial Medal

TRUMP BROS., Wilmington, Dei.,

For Foot Power SCROLL SAWS.

Send stamp for Circular and Illus trated List of Designs of Brackets Boxes, Frames, &c.

THE ORIGINAL WAKEFIELD EARTH COMMODE

TRANSFER **ORNAMENTS**

JULIUS FECHTELER, 104 John St., N. Y. Letil my Carriage Ornaments to dealers only.

CARRIAGE

Manufacturer of Railroad Car, Locomotive, Omni bus Flatform and every variety of Carriage and Bugs Springs. 272 to 250 Passaic St., Newark, N. J.

JOHN W. QUINCY 98 William Street, New York.

NICKEL.

Pig Iron, Lead, Block Tin, and othe Foundry Metals. Cut Nails.

GEORGE BARNES & CO.



AMERICAN SCREW

Manufacturers of

IMPROVED

Gimlet Pointed Wood Screws,

Patented

1876.

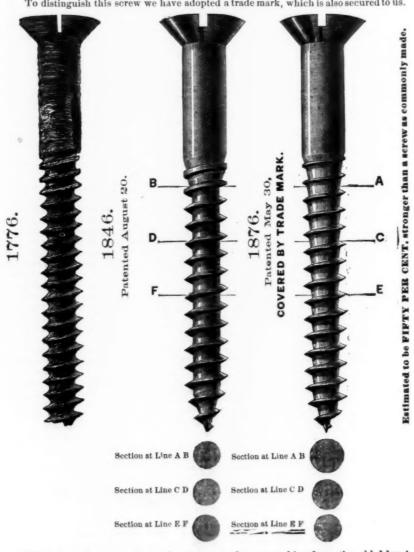


After forty years' experience we offer to the trade our Centennial Screw, patented May 30, 1876, as the best we have ever known.

The method of manufacturing is also patented, and we are changing our machiner, as fast as possible, to manufacture the improved article only. To introduce them, they will be sold at same price as the old style screw

The new screws will be packed in manila colored boxes with new label covering end of box, and enlarged figures showing plainly contents.

To distinguish this screw we have adopted a trade mark, which is also secured to us.



The above drawings show the progress of screw making from the old blunt point to style now adopted.

Experience has shown that the weak point of screws, as formerly made, is at the heel of the thread, where all the strains of forcing the screw into the wood naturally

To avoid the sharp angle existing in the old style of screws has been the aim of all manufacturers, but every expedient hitherto adopted has proved as objectionable as the evil complained of.

It will be seen in our new screw that not only is the sharp angle avoided, but the strength very much increased, as illustrated above. See sections at lines.

CLAIM.

"A Pointed Wood Screw having the outer periphery of the thread upon its body cylindrical, while a portion of the body below the thread and near the neck is conical, the remainder of the body to the point being cylindrical, and yet having all the thread brought to an edge of a constant angle, without jogs in the paths between the threads, substantially as described."

Wood and Iron Ships.

The San Francisco Commercial Herald, a journal whose views on matters connected with our merchant marine are entitled to consideration,

It seems that the special preference given to on ships for some years past is being greatly odified, so that now the best built wooden ships class as high and are rated for as long periods as the best of iron vessels. It was clearly the policy of England to write up and vaunt the alleged superiority of iron ships after her ship timber supplies gave out at home; but was a blind and suicidal policy on our part to fall in with and accept English prejudiced views as gospel. Her Indian possessions furnished large quantities of teak and other timber of the nest desirable quality, but the cost of transporting it to the shipyards of the United Kinglom forbade its use to any very great extent. Canada also raises a variety of shipbuilding wood, and has been largely placed under requisition for supplies. It is however, of inferior quality, in so far as regards duration, with the xception of backmatack, chestnut and cedar, and vessels composed of five or six different kinds of timber are almost constantly in want of repairs after six or seven years of service. It was natural, then, for England to utilize her enormous deposits of iron for shipbuilding purposes, and to give vessels constructed of this material a marked preference was as naturally the policy of the British Lloyds. The result was that English iron ships received higher freights than wooden ones, and the business of employing iron for shipbuilding in this country was resorted to as a measure of self-protection. Within the past six or seven years the notion that iron is superior to wood has not only undergone a decided change but an absolute reversal, and an unlimited number of experiences have been brought forward to prove that wood is far the best material. If an iron ship gets a hole knocked into her she is pretty certain to find a swift passage to "Davy Jones' locker," but there are many methods of keeping a wooden vessel afloat long enough to reach some port under similar circumstances. The bottoms of iron ships are liable to become honeycombed, requiring frequent and careful attention and expenditure, and for this reason English shipbuilders resorted to what is known as the "composite" style, the frame work, sides, bulwarks, spars and yards being of iron, and the bottom of wood, so that it could be coppered or metaled. The magnetic influence of an iron ship upon the compasses has been the cause of more disasters to that kind of vessel than all others combined. A large proportion of these losses has been probably due to the want of sufficient knowledge on the part of the commander, but the evil has not been obviated. The average duration of an iron ship is 15 years, while that of a first-class wooden vessel is indefinite, as is clearly proven by a host of examples, such as the American frigate Constitution; the ship Barclay, 68 years old when broken up at New Bedford; the Dutch galliot Commissaries des Koning von der Heine, built in 1568, and still running after 308 years of ocean service; the whale ship Rousseau, built in 1801, and still doing duty; some of the English teak built ships, and, in fact, a whole fleet of similar cases might be cited. There is no such history on the part of iron ships. But it is needless to go abroad for examples. Right here in San Francisco we have a number of wooden vessels built of Pacific coast ship timber, that have been doing hard and active service all the way from 12 to 16 years without incurring a dollar of expense for repairs to hull other than painting, occasional recalking and metaling. These craft measure from 250 to 1200 tons, and are as sound as the day they were launched. Where is the iron built vessel that can furnish such a record? The inference is that the mania for constructing fron ships is passing away, and that the many lessons taught by experience and close observation are producing a very decided verdict in favor of wooden vessels of the best possible

The Massachusetts Silver Mines .- The Newburyport Herald says: The Merrimac Silver Mining Company, of Newburyport, have broken ground for a new smelting furnace in the immediate vicinity of their works. The present superintendent is, we learn, a Nevada mining expert, who ran the furnaces of the Eureke mine for several years. The company will now be able to save their freight to Jersey City, and the profits on their ores made by other smelters, and have in the bullion produced a product much more readily turned into money. The furnace, it is anticipated, will be fixed up about December 1. The contract has been given to Mr. J. A. Greeley, which is a sufficient guarantee of the thoroughness of the work about to be done. The boiler power is also to be increased.

The growth of iron manufacture in the West is well illustrated in the case of Chicago, which is situated remote not only from the iron mines, but also from coal suitable for the purpose. Of the ten Bessemer steel works in the United States two are located in Chicago, and of the 291,000 tons Bessemer steel rails made in the country last year, 85,000 tons, or nearly one-third of the entire amount, were made in Chicago. The fron industries have 200 establishments, employ 10,000 workmen and manufacture to the amount of \$35,000,000 annually.

From mathemathical calculations based upon theoretical data, Ledebur arrives at the conclusion that the relative saving of fuel, due to heating the blast, is greater in small than in large furnaces, and with refractory ore, more than with readily fusible ones. On the other hand, the limit at which heating the blast ceases to be economical is lower in small than in large

Trade Report.

Office of The Iron Age. Tuesday Evening, Nov. 28, 1876. The protracted uncertainty regarding the result of the presidential election, and the fear that all efforts to adjust existing differences between the two great parties will lead to more or less serious public excitement and disturbance, has had a very disastrous effect upon gen eral business. The promise of the early an tumn has been disappointed, and we are now relapsing into a state of almost absolute stag nation. From this we can expect no relief until the tangled political skein is unraveled, the votes of the disputed states counted, and the count ac cepted by the people of the country. In such an emergency we have but one reliance, and that is upon the good sense and sound patriot ism of the American people. That the country is in danger or its institutions imperilled we do not believe, but that business should suffer from such an anomalous state of affairs as now exists is to be expected. We are also approach ing the holiday season, which is usually a quiet period in general trade, and the fact that the normal difficulties of the business situation are so seriously complicated by doubts as to the issue of the presidential canvass is certainly much to be regretted.

In the financial markets there is little of gen eral interest to note. The money market is without feature. Borrowers on call have been accommodated at 3 @ 41/4 per cent., and money is plenty. On prime mercantile paper the quotable rate of discount is 6 @ 7 per cent.

The gold market is quiet, owing to the balance of two forces operating upon it. The continued shipments of specie have had a depressing effect upon the market, while the political troubles in the South and the excited feeling throughout the country have operated to prevent the otherwise inevitable decline of the premium. We give below the daily range premium since our last report :

	Highest.	Lowest
Thursday	109%	1093
Friday		1093
Saturday	109%	109
Monday	109%	1093
Tuceday	109	1083
Commont bonds b	ni borom ove	armach.

with gold, and were heavy but fairly steady We give below the closing quotations

The stock market has been irregular, but in the main heavy, and with only a moderate speculation. The principal dealings have been in the stocks usually most active. We give below the quotations of shares on the active list at the close of business to-day.

The statement of the city banks for the week shows a gain of \$466,755 in the surplus reserve, and they now hold \$9,811,800 in excess of the legal requirements against \$9,349,300 at this time last year. The loans exhibit a decrease of \$1,659,400 as compared with last week, the legal tenders \$897,600, and the deposits \$1.381.-500. The specie is augmented \$1,019,000, and

the circulation \$56,100. The following is an analysis of the bank totals of this week compared with that of last

week:		
Nov. 18.	Nov. 25.	Differences.
Loans \$259,147,100		Dec\$1,659,400
Specie 19,065,500	20,084,500	Inc 1,009,400
Legal tend's. 43,108,000	48,200,400	Dec 897,600
Deposits 211,313,900	209,932,400	Dec. 1,381,500
Ctrculation., 15,076,600	15,132,700	Inc 56.100

The following are the foreign trade movements for the week so far as reported up to to

Par.			EME	ORTS.			
For	the	week	ended	Nov.	25	:	
			1874.			187	1

Total for week. \$6,198,752 \$2,983,749 \$4,576,916 Prev. reported.. 353,430,040 \$95,023,367 \$253,832,425 Since Jan. 1.... \$359,628,792 \$298,007,116 \$253,409,847 Among the imports of general merchandisc were articles valued as follows:

Brass goods		
Bronzes	11	2,
Chains and anchors		
Copper		
Catlery		17,
Guns		6,
Hardware		2,
Iron, plg, tons	917	18,
Iron, sheet, tons	5	
Iron cotton ties		
Iron, other, tons		34,
lron ore, tons		
Metal goods	112	10.
Nails		-
Needles	11	5
Old metal		
Platina		2
Per. caps	14	2
Saddlery		1
Steel	709	9.
Tin, boxes		18,
Tin. 3939 slabs		33.
Wire		8,
Zinc	92.215	1.

For the week ended Nov. 25:
Total for the week
Total since Jan. 1, 1876
Same time in 1874
Same time in 1873
Government bonds at the close were quoted

as follows:	
Bid.	Asked.
U. S. Currency 6s	12434
U. S. 6s 1881, reg 116%	11636
U. S. 6s. 1881, cou	11736
U. S. 6's. 1865, reg	109%
U. S. 6's. 1865, con	109%
U. S. 6's, 1865, new reg	11236
U. S. 6's. 1865, con	11234
U. S. 6's. 1867, reg	115%
U. S. 6's. 1867, coa	115%
FT C 61 1060 mm	440

S. 6's. 1968, reg., S. 6's. 1868, cou. S. 10-40 reg... S. 5s. 1881, reg., S. 5s. 1881, cou., S. 4½ per cents. The following were the closing quotations of

active shares :		
At'antic and Pacific Telegraph		Asked 153
Chicago & Northwestern		353
" Pref	. 29	593
Chicago, Rock Island and Pacific	100	1004
Chic., Bur. & Quincy	.114	114

Bid.	Ask
Col., Chic. & Ind. Cent 334	220.00
Clev. Col., Cin. and Indpls 87	Я
Cleveland and Pittsburgh 88%	8
Chicago & Alton	10
Chicago and Alton Preferred 109	20
Consolidation Coal	3
Canton 25	8
Del., Lack and Western 69%	6
Delaware & Hudson Canal 69%	6
Adams Express	10
United States Express 56%	5
Wells, Fargo & Co. Express 86%	8
Erie	
Harlem 136%	13
Hannibal & St. Joseph 1814	1
Pref 26%	9
Illinois Central79	7
Kansas Pacific 1	
Kansas & Texas	
Lake Shore 56%	D.
Michigan Central	4
Morris & Essex 91	9
Milwaukec & St. Paul 19%	9
Pref 51%	5
Mariposa	-
** Pref 4%	
New York Central	10
New Jersey Central 34%	8
New Jersey Southern %	
Ohio & Mississippi 5%	
** Preferred 8%	
Pacific Mail 24%	9
Panama123	12
Pittsburgh & Fort Wayne 1011/	10
Pacific of Missouri 8	-
Quicksilver 18%	1
Pref	9
St. L., Kan, City Northern 5%	
" Pref 26%	2
Tol., Wabash & Western 7%	~
Union Pacific	5
Western Umon Telegraph 72	7

GENERAL HARDWARE.

There is very little to report this week regarding the Hardware market, which continues dull and is likely to remain so until the political questions which absorb so much attention are definitely settled.

We have noticed from time to time the increasing favor that American Hardware and House Furnishing Goods are receiving in the markets of Europe, and in times like these, when domestic trade is dull and the sesson' business is coming to a close, a foreign demand is particularly welcome. We notice in this connection some fair sized shipments of Axes by the Ten Eyck Axe Mfg. Co. to London and Germany, and a lot of Axes by the same company to Kingston, Jamaica. We were slso shown a cablegram from England to the Bailey Wringing Machine Co., of this city, received yesterday, ordering a large shipment of their Meat and Vegetable Choppers.

In our issue of 16th instant we published the joint circular of Phelps, Dodge & Co., and others, regarding the proposed compromise of Frank Sturges & Co., of Chicago, which has called forth the following reply:

To the Editor: Our attention has been called to a circular issued by Phelps, Dodge & Co., of New York, published in The Iron Age, and from there copied by the Chicago Tribune.

The statements found therein do us injustice, and are false in fact.

The statements found therein do us injustice, and are false in fact.

We cannot here go into a comparison of our debts and the value of our assets for the purpose of showing whether or not we can pay 80 or 90 cents, as is asserted in the circular.

It is enough to say that a very full meeting of our creditors, which lasted four days, after a detailed and laborious examination of our affairs, recommended our creditors to accept 50 cents on the dollar. But we are more concerned now in meeting the charges of bad faith. This meeting of creditors at Chicago appointed a committee to examine our books, as well as the origin and nature of all claims.

The Chicago agent of Phelps, Dodge & Co. was one of this committee. Their report entirely exonerated us from all charges of bad faith, both as to the method of conducting our business, and the nature of the claims upon our assets.

Is subject to discount 25 per cent. instead of 20 strength. per cent. as formerly :

Silver's Patent Meat Stuffers Nos. 1 and 2, Single Geared. Capacity of No. 1, 6 lbs; weight of No. 1, when boxed, 30 lbs.; price.

Capacity of No. 2, 9 lbs.; weight of No. 2, when boxed, 40 lbs.; price. \$6.00

Nos. 3 and 4, Double Geared.

The Meriden Cutlery Co. have made the following changes in their price list of July, 1876; No. 455, Table and Medium Knives, are changed to \$10, and No. 455, Dessert Knives, to \$8.75. The discount remains as before, viz., 25 per

Horace Durric & Co. have issued a circular illustrating the Winsted Toe Calks, which are made in four sizes, and are offered to the trade at 10 cepts per pound, subject to discount 5 @ vate terms. We quote: Coltness. \$28.50 @ 71/2 per cent., according to quantity. They \$29; Glengarnock, \$28; Eglinton, \$26 @ \$26.50. have also issued the following:

Perkin's Snow Shoes. Average number of shoes in a keg. 177 128 110 91 74 908 165 131 100 83

The Perkin's Snow Shoe is a light, concave Shoe, so shaped as to prevent the snow from balling and athering to the hoof, and has been used with great satisfaction for the past seven years. It is equally effective as a mud Shoe, and indeed is much in favor with the shoers of trotting and driving horses, and that class of smiths who do fine shoeing.

We make six sizes, from No. 0 to 5 inclusive, both front and hind, and put them up single numbers or assorted in a keg the same as Horseshoes. Price, per keg, \$1 more than Perkin's Horseshoes.

Horace Durrie & Co., 97 Chambers Street, N. Y., Agents for Rhode Island Horseshoe Co.

By an advertisement among our Special

By an advertisement among our Special Notices, the American Screw Company caution the public against the use of any Screw machinery infringing certain patents belonging to them

The Union Hardware Co., No. 120 Chambers street, have added to their specialties the Shears formerly sold by Rowe, Babcock & Post. They offer these goods from stock at prices to suit the times.

The following circular explains itself:

DISSOLUTION NOTICE DISSOLUTION NOTICE.

ERIE, PA., Nov. 16, 1876.

Notice is hereby given that the partnership heretofore existing between F. F. Adams and A. H. Gray,
under the firm name of F. F. Adams & Co., is this
day dissolved by mutual consent, the business being
continued and all accounts settled by F. F. Adams.

F. F. Adams.

A. H. Gray.

ERIE, PA., Nov. 22, 1876.

We have this day associated ourselves together as partners, to do business under the firm name of F. F. Adams & Co. to continue the business heretofore done under that name and by C. F. Adams, all accounts of the late firm and or C. F. Adams will be settled by the new firm.

F. F. Adams & Co. F. F. Adams, M. N. Lovell, C. F. Adams.

Thanking the patrons of the old arm for the many favors shown, I would ask for the new firm a continuance of the same. Mr. Lovell's long experience in the business (having been Superintendent of the factory since its first commencement, in 1869), is the best guarantee that can be offered of his ability; this, with the addition of the Wringer business and personal services of Mr. C. F. Adams, I believe place the new firm in a position to supply the wants of the trade in our line of goods better than ever enjoyed by their predecessors.

Respectfully, F. F. Adams. Respectfully, F. F. ADAMS.

The New York correspondent of the Sheffield Independent writes as follows under date of Oct.

The statements found therein do us. In Justice, and are false in fact of the Smeried Independent writes as follows under date of Oct. We cannot here go into a comparison of our debts and the value of our assets for the purpose of showing whether or not we can pay 86 or 10 cents, as is asserted in the circular.

It is enough to say that a very full meeting of comparison of the comparison of the commended our creditors to accept 50 cents and nature of all called a committee of the composition of the committee of the comparison of the comparison of the comparison of the control of the co on Saturday we were compelled to file a voluntary petition in bankruptcy to prevent Puelps, Dodge & Co., and Naylor & Co., getting a preference over other creditors.

That we have been unfortunate is true, but that anything in our business career has been brought to light that impeaches our good faith and commercial integrity, we deny; and of the truth of this statement we have not a particle of doubt of our ability to convinee our candid creditors as we have opportunity to meet them.

Frank Sturges & Co.

Chicago, Nov. 20, 1876.

The demand for Nails is fair, considering the season and the usual slacking off in orders as the month draws to a close. We quote as before, 10d. to 60d., \$3 per keg net, with a discount of 10 cents per keg for lots of 100 kegs and over.

The Balley Wringing Machine Co. illustrate in their advertisement on page 21 Silver's Patient Mac Stuffers, for which they are agents. The following is the list for these goods which is subject to discount 25 per cent, instead of 20 per cent at formerly.

IRON.

American Pig.-We cannot report any improvement in the feeling this week. Indeed, the demand seems rather smaller and prices siderable sales, and continue our quotations of last week, viz., Foundry No. 1, \$21@ \$22; 25.00 Foundry No. 2, \$19 @ \$20; Gray Forge, \$19 @ therefrom the following: "Only limited quan-

sales, but now they make no difference whatever; 200 tons Coltness from ship sold on pri-

Rails .- In Iron we note the sale of 600 tons (perhaps 1200), delivered in Providence, said to be at \$37.50. In Steel, 2000 tons on private terms. We quote Iron at mill, \$36 @ \$37, and Steel. \$50.

Old Rails.-We note the sale of between 200 and 300 tons at a price equal to \$20, cash. We quote, \$20 @ \$21.

Scrap.-The market is dull and without change; 100 tons sold to go East on private

METALS.

Copper.-Although people expect a peaceful solution of the political imbroglio down South, business continues to be more or less affected by the uncertainties connected therewith; in addition to which we have a sort of broken up week in consequence of the Thanksgiving festivities. The transactions in Copper have from these causes been unusally light, not exceeding 100,000 pounds Lake Superior at 20% c. @ 201/2 c Buyers stand aloof, and there is general stag-nation; holders, nevertheless, show if anything increased firmness, and the market closes steady at the quotations named; Baltimore at 201/c. nominally. The London cable quotation is £85 for Best Selected, and £77 for Chili Bars, a decline of £1 during the fortnight. English mail accounts have reached us as late as the 16th instant, when Best Selected stood £87. The English as well as the Continental Copper and general metal markets have been quite feverish for a fortnight past, the immediate future being extremely doubtful, both as regards politics and general trade, both so intimately linked together over there. For the many cases there is no margin whatever. first time after a long interval of abstinence, the larger operators for a rise took an extensive interest in the leading metals, but the final re sult of these ventures now looks quite doubtful, depending, as it does, on a great many contingencies, such as the maintenance of peace and an easy money market, the revival in trade, &c. The position over there is not dissimilar from the one here. People are well disposed to do business, stocks in the interior being light in nearly everything, but they want to be able to form a clearer judgment of the political future ere they cultivate old connections to their full extent or form new ones. There is but a moderate demand for manufactures, which we quote 31c. for Sheathing and 32c. for Bolts and Braziers; New Yellow Metal Sheathing, 181/2c. @ 19c., and Yellow Metal Bolts, 26c. @ 28c., net cash.

Tin .- This metal during the past fortnight has gone on fluctuating most violently in Europe. A week ago, however, as per cable dispatch then received, the London market, from £76. 10/ for Straits, gradually recovered to £78 on Thursday last, since when the improvement has made some further progress, Straits closing to-day at £79. This latest rise may be attributed to the at present less threatening aspect of the Eastern question, inasmuch as it does not seem likely that England will actually go to war. On this point values in Europe and elsewhere are extremely sensitive. Merchants do not mind much a war be tween Russia and Turkey, as long as England, for some reason or another, abstains. Al the extensive metal speculations lately mangu rated in Europe are, in a great measure, swayed by these considerations, and this explains the unsettled state of things now prevailing there Singapore, on the 21st inst., cabled \$21, with an exchange of 4/2%. The latest telegram thence, dated 24th inst., quotes the price down here as being 181/c., gold, while all that can be obtained here at present in large lots is 18c., gold. Our market has been a little more active, but closes quiet and firm as follows, large lines, in gold: Straits, 18c.; English Refined is nominal, it would also cost 18%c., gold, to lay it down here; do. Common, 17%c., and Banca, 20c. The English quotation by mail on the 16th instant was £79 for Straits. Tin Plates bave been inactive, but are quite firm at the following quotations for large lots, ordinary brands, gold, per box: Charcoal Bright, \$6.75 @ \$7; do. Ternes, \$6.25 @ \$6.50; Coke Tin, \$6 @ \$6.121/4, and do.

done at 6.121/c. @ 6.15c., currency. We quote the market for Common Domestic firm at the close, at 6.05c., currency. Of Soft Missouri nothing could be had at St. Louis now under 5%c., currency, equal to 6.15c., currency, here. Select ditto, has remained inactive and nominal. weaker than last week. We hear of no con- Of Common Foreign, 30 tons "San Andres" sold at 6.70c., gold. English mail accounts reach up to the 16th instant, and we extract Foundry No. 2, \$19 @ \$20; Gray Forge, \$19 @ therefrom the following: "Only limited quantities of English Pig are offering, while at the moment there are no lots of Spanish available for export. Lowest prices are: Spanish Pig. 22. 7/6; Sales are almost confined to very small lots. The stock here is also light. In former times the late advices from the Manufactured continues in moderate demand.

other side would have greatly stimulated at 8%c. for Bar, 9c. for Pipe, and 9%c. for Sheet, less the usual discount to the trade

Spelter and Zinc .- Domestic Spelter remains duli and nominal. Brands which, in order to place them, have to be sold in the open market would not bring over 6%c., currency, while the better known ones bring 6%c., currency, at which they are taken by consumers. Foreign is dull and nominal at 7c., gold. Stock, 75 tons. Europe is generally quiet. Sheet Zinc 18 offering at La Salle at 7%c., currency, equal to 7.55c., currency, here. This is an extremely low figure. We quote Mosselmann, 81/c. @ 81/c., gold.

Antimony-Has relapsed into dullness, and we quote the same 131/2c. @ 131/4c., gold, nom-

COAL.

The condition of the market to-day differs ery little from that which is expected immediately after an auction sale. Prices have hardly een adjusted, and many dealers have not issued their circulars. We have quotations from most of those whose figures usually appear in our columns. We do not, however, give much importance to these figures, because, although there is a good deal of Coal sold and considerable inquiry for it, cargoes are constantly seeking markets, and dealers are looking out for cusomers with whom they can place even small lots, while a man with money can get coal at decided concessions from the present extremely low prices. The drop in prices has been from 25 to 35 cents per ton upon the average. If there is not a stoppage of sufficient magnitude to materially diminish the output a still further reduction seems to be expected. Yet a further reduction of price it would seem must be followed by a stoppage, since at the present rates the margin is almost nothing, and in

PRICE	ES FOR DE	CEMI	BER.			
-	Lump.	Steamer.	Broken.	Egg.	Stove.	Chestnut.
PENNSYLVANIA COAL	co., at N			65	cente	per
Pittston	3.68	2 66	2.66	2 59	8.30	8.56
DELAWARE AND HI	ken, N		co.,	at	Week	haw
Lackawanna	3.00	3.00	8.00	8.00	3:75	8-78
LEBIGH AND WILKE	S-BARRE Cohnson, N	OAL J.	co.,	f.o.b	, at	Port
Old Company's Sum Honey-Brook Lehig Wilkes-Barre Plymouth Red Ash.	3.00	3.00	3:00	3.00	3.75	8 . 2!
DELAWARE, LACKAV	ken, N. J		estri	RN, 8	t H	obo-
Scranton		77	2.69	2.67	3.61	3.84
FREDERICK A. POT	rs, 110 Br	oadw	ay,	New Hobo	You ken.	k
L. & W. C. Co.'s Will Barre L. & W. C. Co.'s, Co. Lehigh	old 3.00	8.00	8-00	8 00	3 75	3 · 25
L. & W. C. Co.'s, mouth Red Ash.	Ply-	1			- 1	

3·75 3·25 3·25 3·75 3·25 3·00 3·00 3·00 3·00 3·75 3·45

Upper Lehigh and Coun cil Ridge	3	. 1	75			 3	.25	3	25	3 . 75	3.85
Everhardt Wyoming								3	.00	3.75	3.85
Wilkes-Barre						 3	.00	3	.00	8.75	3.54
Shamokin				1	.,	 1.				8.75	3.52
East Spring Mountain	1							-			
Lehigh	. 13	* '	75		. ,	 3	. 25	3	25	8 75	3.5

4-80 2-80 2-80 2-85 3-60 3-70 G. B. LINDERMAN & CO., No. 111 Broadway.

MEEKER & DEAN, 111 Broadway.

Sugar Loaf, (Lehigh).... 8 25 8 25 8 25 8 75 8 50

*Not made prices for December at time of going o press. The figures are the averages of the Novem-

†Auction prices of November 21. We quote Bituminous Coal as follows: Cumberland, at Georgetown \$330 @ \$
West Virginia, at Baltimore. 450 @ \$
Kittaning f. o. b., Baltimore. 425 @ \$
Newburg Orrel. at (\$
Despard, at Baltimore. 5
Broad Top, at South Amboy. 5
Morrisdale, Wigtons. 12 Cunard...
at Philadelphia...
Consolidation Coal Co. f. o. b., George-@ 8.50 more.
In barges at New York
Maryland Coal Co. f. o. b., Baltimore.
Waryland Coal Co. f. o. b., Georgetown

OLD METALS, PAPER STOCK, &c.

We have nothing new to report in the condition of the market for Old Metals, Paper Stock and other junk materials. Business continues very quiet, and prices remain about the same as last quoted. The market for Rags has somewhat improved since last week, and some grades are in active demand, especially White Rags. No. 1. Quotations, however, remain unaltered, with the exception of Soft Woolens, which have advanced 1/6e. a pound. Other articles present no material change. We quote the following as the current purchasing rates:

Rags, &c.—Canvas, Linen, 4%c. @ 5%c.; do. Cotton, No1, 5%c.; No. 2, 2%c.; White, No. 1, 5c.; No. 2, 4c.; Colored, do., 2c.; Mixed, W. olen. 2c. @ 3c.; Soft, do., 5%c.; Gunny Bagging, 1%c.; Jute Butts. 1%c. @ 2c.; Kentucky Bagging, 3c.; Book Stock, 3%c.; Newspaper Stock, 2%c.; Waste Paper and Scraps, 1%c.; Kentucky Baie Rope, 4c.; Oakur Jans. No. 1, 4% @ 5c.; do. No. 2, 3c.; Tarred Shaking, 1c. @ 1%c.; Grass Rope, 3c.

IMPORTS

Of Hardware, Iron, Steel and Metals into the Port of New York, for the week ending November 28, 1876 :

McCoy & Co. Bundles, Hardware. Hardware.
Boker Hermann & Co.
Mdse., pkgs., 10
Arme, cs., 122
Cooper, Hewitt & Co.
Wire, cks., 2
Carr & Hobson,
Plows, 2
Hilger E. & Co.
Chans, cks., 49
Laughland & Co.
Wire, cks., 3
Wire, rolls, 160
Wire, cks., 3
Wire, rolls, 12
McCoy & Co.
Mdse., pkgs., 5
Mason J. W. & Co.
Wire tope, colls, 4
Schoverling & Dalty,
Mdse., pkgs., 1
Witte J. G. & Bros.
Cases, 9
Caseks, 3
Order. Naylor & Co. Bars, 222 Cases, 1 Bundles, 41 Sanderson Geo. & Bundles, 42 Casks, 2 Sulzbacher. Hyr Wolffe, Bars, 245 Packages, 23 & Co Hyman Packages, 23 Cases, 5 Woodford W. O. Cases, 12 Bundles, 5 Order. Bundles, 239 Cases, 5

Order.
Spades, bdls., 5
Anvi.s, 120
Casks, 2
Without Blils of Lading,
Wire, bdls., 198 Iron. Alexandre F. & Sons, Bundles, 295 Bundles, 295
Henderson Broe.
Pig, tone, 200
Mdse. pkgs., 60
Naylor & Co.
Spiegel, tons, 202
Bars, 4772
Perkins, Livingston & Co. Cast, tons, 100 Order, Bundles, 1096

Steel. Carey & Moen, Rode, bdis., 212 Lang W. Bailey & Co. Bundles, 251 Naylor & Co. Scrap, spring, tons, 60 Prosser Thos. & Son, Forgings, 26 Tires, 8 Bars, 222

Loose scrap, tons, 64 Tires, 4

Metals.

Bruce & Cook,
Tin plates, bxs., 30
Drexel, Morgan & Co.
Lead, pigs, 988
Erie Railway Co.
Tin plates, bxs., 138
Garth Iron and Tin Co.
Tin plates, bxs., 133
Leaycraft & Co.
Scrap metal, cs., 1
Naylor & Co.
Tin plates, bxs., 1244
Owen A. Tin plates, bxs., 1244 Owen A. Tin. bxs., 6 Phelps, Dodge & Co. Tin plates, bxs., 4355 Scheider Jos. & Co. Tin, bxs., 309

Tin, bxs., 309
Order,
Lead, bars, 1302
Tin plates, bxs., 15,664
Tin, bxs., 355
Without Bills of Lading,
Tin plates, bxs., 9206
Tin plates, cs., 52

PHILADELPHIA.

ness for some time past. New equipments are needed on most of our American railways, but the condition of their finances is keeping many the condition of their finances is keeping many der date of Nov. 23, report the Iron market as of them out of the market. In the meantime, follows: There is no change to note in our market. The demand is good, and prices are doing, we notice the reply of President Scott, of the Pennsylvania Central, to a deputation of Philadelphia merchants asking for more cars to move freight, the statement that that company was already building 1800 new cars to meet the increased demand for tonnage.

Pig Iron.-The market shows no change either in price or demand. Business continues on the same limited scale, but prices seem to be a little steadier, and with diminishing supplies it is not likely they will recede much fur ther, unless there is a prospect of largely increased production, which is very improbable. Forge Irons and the lower grades are scarce, and whatever weakness there may be is in No. 1 Foundry. We are informed by one of the leading consumers in this vicinity that, notwithstanding the decline in quotations, the cost of Pig Iron to them is greater at present than at any time during the year. This is explained by the fact that cheap outside lots could be bought very low, making the average of all their purchases considerably under quotations, while at present their requirements have to be met by purchases in the ordinary way. Taking everything into consideration, therefore, the market is undoubtedly getting into a healthy condition, and it is not unlikely that the tone will improve before many weeks are over. In the meantime, sales are all in small lots within the following range of prices, say: No. 1 Foundry, \$21 to \$22; No. 2 do., \$19.50 to \$20; Gray Forge, \$19 to \$20.

Blooms.—Business centinues to drag along slowly, and although we make no change in quotations the market is weak, and prices nominal within the following range, say: Charcoal Scrap Blooms, \$45 to \$47; Charcoal Ore Blooms, slowly, and although we make no change in quotations the market is weak, and prices nominal within the following range, say : Charcoal Scrap Blooms, \$45 to \$47; Charcoal Ore Blooms, \$41 to \$42; Charcoal Billets of superior quality, \$55 to \$62; and Bars for converting into steel, made of best Champlain Iron, \$72 to \$75. Strictly Cold-blast Charcoal Blooms, hammered, are quoted \$62 to \$64, and Billets, \$70 to \$72.

Ores.—There is more inquiry for Ores, and sales are reported as follows: New Jersey Magnetics; Hacklebarney Bessemer Select (broken), \$3, cash, f. o. b.; Red (washed) for Foundry Metal, \$3.75; do. Hoff, for Foundry Metal, \$3.75 to \$4, f. o. b. Port Oram. Lancaster Magnetics, 56 per cent., suitable for Bessemer purposes, \$4.25, f. o. b. cars at Laucaster, Pa. Virginia Ores are entirely nominal, and offered f. o. b. at Richmond, Va., as follows: Magnetic, \$4; Specular for Bessemer, \$4.50; Selected ditto, 65 to 70 per cent. of Metallic Iron, \$5. At Cleveland, Lake Superior, \$7, and Republic Mine, \$7:50.

Manufactured Iron .- In this department there is no change whatever to report, except that the market is duller and prices weaker. Business is lighter than at any time this year, and a reduction in price seems to have no effect, buyers will only take what they require, and although good brands of Bar Iron are offered in quantity at 2c., and even less, we hear of no sales of importance. Sheet Iron shares the dullness with Bars; business has dropped off to nothing, and the mills are either shut down ennothing, and the mills are either shut down entirely or piling up stock. Plate, Skelp and Tank are also quiet and dull, although numerous inquiries are being made for large quantities of fron for future delivery. In some instances we hear of offers made and refused for large quantities of Plate Iron, which, at all events, proves that confidence is felt in present values, and while there is a willingness to self for immediate delivery, there is more disposition to buy at present rates for future delivery than there is to sell. We quote Bar Iron 1-90c. @ 2·10c. for Ordinary Brands, and 2·20c. to 2·25c. for Best Refined; Tank Iron, 2½c. to 3c. and upward, according to quantity; Skelp, 2½c. @ 2½c.; Muck Bars, \$37 @ \$39.

Steel Rails.—There is no change to note.

Steel Rails.—There is no change to note. We hear of sales in small lots at \$50, which is our quotation.

Old Rails.—We hear of the sale of 500 tons at \$21 at an outside point. We quote \$21 @ \$22.

PHILADELPHIA.

Office of The Iron Age, 220 South Fourth St., | Me have again to report a very quiet week in business circles, attributed chiefly to the continued uncertainty in regard to political matters. The wholesale trade in every department—is almost at a stand, and although no immediate improvement is looked for, there is a very sangulus feeling in regard to the future, providing there is a satisfactory and speedy settlement of the present political difficulty. In the meantime, while the present uncertainty prevalls, there are none so hopeful as to expect any change for the better.

In our manufacturing establishments general dullness prevalls, partly due to causes above named, though it is not at all probable that under any circumstances would an improvement take place until after the new year. After the new year there is a fair prospect of change in quietties arise there is reason to think we shall see a gradual increase of activity in many of the leading branches of trade. In this connection it may be well to correct the statement made by the Philadelphia correspondent of a New York daily newspaper under date of Nor. 24th, that "the Baldwin Locomotive Works discharged 600 hands, a forthight and that the present is a ground with the present of the time in The Iron Age), and that their pay roll on the 24th instant was 1638 hands, and that they reduced their force from 1800 to 1100 some three months ago (as stated at the time in The Iron Age), and that their pay roll on the 24th instant was 1638 hands, and that they reduced their force from 1800 to 1100 some three months ago (as stated at the time in The Iron Age), and that their pay roll on the 24th instant was 1638 hands, and that they reduced their force from 1800 to 1100 some three months ago (as stated at the time in The Iron Age), and that their pay roll on the 24th instant was 1638 hands, and that they discharged no hands as stated at the time in The Iron Age), and that their pay roll on the 24th instant was 1638 hands, and that they reduced their

ST. LOUIS.

HOT BLAST CHARCOAL. No. 1 F'dry, from Hanging Rock Ores. \$24-00 @ 25-00 No. 1 F'dry, from Hanging Rock Ores.\$22.00 @ 23.00 " 1 Mill, ... 23.00 @ 25.00 COLD BLAST CHARCOAL
 Car Wheel from Hanging Rock Ores.
 35.00 @ 43.00

 " Tennessee Ores.
 26.00 @ 28.00

 " Alabama and Georgia Ores.
 28.00 @ 40.00

 Car Wheel from Kentucky Ores.
 28.00 @ 42.00

CINCINNATI.

Messrs. L. R. HULL & Co., under date of Nov. 25, write us as follows: Pic lnox.—The market has ruled steady and without material change since our lat report. Best grades of Foundry Iron are not in over-supply, and are held firmly. Inferior grades are offering more freely. The inquiry for Mill Iron has been good, especially for Cold-short grades:

good, especially for Cold-short grades:

HOT-BLAST FOUNDRY.

Hanging Rock No. 1, Charten 22:50 @ 24:50 -4 mos.

Hanging Rock No. 2, Charcool 22:56 @ 23:00 -4 mos.

No. 1, Coke. 24:00 @ 25:50 -4 mos.

No. 1, Stone
Virginia No. 1, Coke. 22:00 @ 20:00 -4 mos.

No. 2, 20:00 @ 20:00 -4 mos.

Virginia No. 1, Coke. 23:00 @ 24:00 -4 mos.

No. 2, 20:00 @ 20:50 -4 mos.

No. 2, 20:00 @ 20:50 -4 mos.

No. 2, 20:00 @ 20:50 -4 mos.

Red Short, No. 1, Coke. 23:00 @ 20:50 -4 mos.

Fannie U. 8, Scotch, No. 1, 24:50 @ 20:50 -4 mos.

Fannie U. 8, Scotch, No. 1, 20:00 @ -4 mos.

Southern Ohio Am. Scotch,

No. 1, 20:50 @ -4 mos.

FORGE IRONS. No. 1.... Forge irons.

CAR WHEEL AND MALLEABLE.

CHATTANOOGA.

Mr. S. B. Lowe, under date of Nov. 27, reports as follows: There are no changes worthy of note in the prices of metals. The movements have been about 650 tons for the past week, with contracts of about 1000 tons for future delivery. A few contracts to rores have been mair. Quotations for same are appended:

No. 1 Foundry, extra. \$22:00 @ 32:50
No. 1 Foundry 20:00 @ 21:00
No. 2 Foundry 17:50 @ 18:50
Gray Fore 16:00 @ 16:50
White and Mottled 15:25 @ 15:50 HOT BLAST CHARCOAL. No. 1 Foundry, extra. \$22.00 @ 24.00
No. 1 Foundry \$20.00 @ 21.50
No. 2 Foundry \$18.00 @ 19.00
Gray Fore \$17.00 @ 17.50
White and Mottled \$15.50 @ 16.50 CoLD BLAST CHARCOAL

Car Wheel Metal \$23.00 @ 28.00
Forge Metal 17.00 @ 20.00
Cast Scrap, Heavy per ton, 12.00 @ 15.00
Cast Scrap, Light \$8.00 @ 19.00
Old Car Wheels 18.00 @ 19.00
Old Rails 18.00 @ 19.00
Old Hails 18.00 @ 18.00
No. 1 Wrought Scrap per lbb, 3c. @
Brown Hematite Ore, 50 to 56 per cent.
pet ton \$2.00 @ 2.40
Red Metalliterous Ore, 59 to 56 per cent. per ton 1.80 @ 1.95 COLD BLAST CHARCOAL.

RICHMOND.

Mr. Asa SNYDER, Iron Merchant and Furnace Agent, Richmond, Va., writes as follows under date of Nov. 27: Market same as last week. We quote:

We quote:
Virginia cold-blast Charcoal Pig Irons \$28.00 @ 35.00
Virginia hot-blast Charcoal Pig Irons... 24.00 @ 25.00
Va. hot blast Coke Pig Iron, No. 1 ex. 24.00 @ 25.00

4. 4. 4. 4. 4. 4. 4. No. 2 ex. 22.00 @ 25.00
4. No. 3 ex. 19.00 @ 20.00

FOREIGN.

FRANCE.

PRANCE.

(Moniteur des interets Materiels).

PARIS, Nov. 12, 1876.—Metals.—Business in metals has still been conducted on a large scale in most of the centers of distribution in Europe during the week. Although speculation has had a considerable share therein, the demand for consumption and government purposes has been tolerably extensive, and the outlook seems a reassuring one for the moment. It should not be overlooked, however, that there is the constantly reviving nightmare of the Eastern question still lurking behind the scenes, and that nothing can be put down as safe until the doubts in-Messrs. SPOONER & Collins, Iron commission agents, 490 North Third streets, St. Louis, need that of Nov. 23, report the Iron market as follows: There is no change to note in our emarket. The demand is good, and prices are very firm at our quotations:

CIARCOAL.

Missuri No. 1 Foundry. \$2:00 @ 25:00—4 mos. No. 2 Found

the facilities for getting goods through the Mediterranean ports and thence by rail to Poland, now place Russla in a position to replensh supplies even during the winter months, if she does not mind the higher freight. Formerly, the main traffic with Northern Russia stopped on the close of navigation; this is changed, and Lead has the benefit of it, and so has Copper in a still greater measure, being dearer. Little has been done here the quotation is 54 francs. The Russlans have bought at Marsellies, to be forwarded to Odessa, 500 tons, and as the supply there was limited, this has stimulated a further rise, and 52 francs is now asked by some smelting works. Spelter is neglected and rather weak, especially here, where we quote the same 53:50 to 59 francs. Marsellies is unchanged. Iron.—The principal matter of interest for the week have been the last adjudications of Steel rails, to be delivered at Naples. Westphalia offered rails of 18 feet at 304:30 francs per ton, and the Terre Noire at 201:50. The price in France for a good Steel rail, delivered here, may be put down as being 200 francs. The Creusot and Terre Noire works have also got an order for 1000 tons Steel plates for the Italian Navy, at 36 francs the hundred kilos, at the works, for the lowest quality, with two francs additional for each higher grade. From what precedes the works in France is better than anywhere else, the demand for local agricultural purposes being saturfactory and promising. Coal.—Moderately active at tolerably firm prices. Beet root sagar refluers will take less Coal than is usually the case, the crop being short.

BELGIUM.

BELGIUM.

(Revue Universelle).

BRUSSELS, Nov. 12, 1876.—Iron.—The market is heavy, and we look for no improvement until the traination of the winter campaign. Prices continue remarkably low and larger transactions are of rare occurrence. Small orders arriving by driplets keep up a moderate show of activity at the rolling mills and other works. The supposition was when a slight spurt manifested itself a couple of months ago that a serious revival was at hand, but the nascent activity has proved to be short-lived, and we now find that it was chiefly limited to architectural Iron, for which there was then a sudden active inquiry which has been slienced since. This having been the case all leading establishments have come to the decision that some energetic steps should be taken to reduce general expenses. The Acoz Society has even resolved to stop work at one of its rolling mills. A good many important railway material adjudications will in the meantime come off in Germany and Austria ere this month is brought to a close. Fold.—Coal mining is vigorously pushed all ever Belgium, there being a growing demand for household purposes. The first flosts have occurred and admonish us that canal navigation may be closed any day. Coal for Industrial wants is still neglected by reason of the stagnation in our fron regions regions

(Borsenhalle).

(Borsenhalle).

(Borsenhalle).

Hamburgh, Nov. 11, 1876.—Medals.—The stocks of metals in the interior have run notoriously low, and the trade and consumers have taken courage in consequence. With the scle exception of Spelter a good run of orders has dropped in at the ports and great minand centers. Copper has been a great deal more lively than the previous week, both dealers and consumers operating more extensively; prices of all sorts are firmer and rising. Berlin is well supported at 78 to 88 marks for Englist and Australian. Mansfield, 85:70 to 86. English at Stettin ranges between 85 and 93. We are quite stiff here; some lots of old Copper have been taken at 76 marks, and five tons T. C. T. are offering at 80 marks. We quote Minnesota, 105 marks; Drontheim, 88; and Best Selected, 83. Tin.—There is a pretty good consumptive demand, and, stimulated by the speculative movement in neighboring countries, the German markets are rising likewise. At Berlin, Banca is worth 80:50 to 81 marks, and English, 78:50 to 79; the stock here is quite reduced. We quote: Banca, 78 to 80; English Refined, 81 to 83. Lead.—Great firmness characterizes our markets and prices improve. At Berlin, I rimowitz, Hartz and Saxonian command 21:75 to 22 marks. German, at Stettin, is worth 21 to 23, and Spanish, 26 to 27. Here some business has been done in German Lead at 21:75. The following are the quotations: German, 22 to 22:50; English, 23:50 to 24; ditto Sheet, 24:50 to 25; Spanlsh Pig., 25:50. Spelter.—Nothing 1: doning in Germany. At Berlin, good quality Silesian 1s worth 22:75 to 23:75 marks; at Stettin, 23 to 25:50, and here, on the spot, 23:50, and to arrive, 24.

(Koch & Vherboom)

(Roch & Vierboom).

ROTTERDAM, Nov. 14, 1876.—Thu.—The Netherland Trading Society will sell on the 29th instant, at public auction, 29,600 clabs Banca and 3500 ditto Biliton. The recent advance to 46 guilders in this market in Banca, and to 45 in Bilitton Tin, spot and to arrive, has been too rapid to assume much stability, the more so as during the next fortnight the impending sale will quiet the markets, as is usually the case so closely upon an auction.

EAST INDIES.

Gilliflian, Wood & Co.)

SINGAPORE, Oct. 7, 1876.—Tin.—Supplies have been moderate, but prices at the close are a little weaker, owing to an advance in exchange. Sales have been made at \$21375., and 2125 per picul. In Penang a fair business has been done at \$30'875/, per picul down to \$30'875/ per picul down to \$30'875/ per picul down to \$30'876 for nasmetted Tin. It will be noticed that during last month the only shipment of Tin from this port to the United States was about 2's tons by the Yanora for New York, and we learn by telegram that only about 80 tons have been shipped from Pouang, we presume by steamer. Tonnage.—The supply of disengaged vessels is moderate, and rates are steady. The Vanora has cleared for New York with 421 piculs of Tin. No charters have been made for the United States during the past fortnight, and the New York and Boston berths are va-asit. Exchange.—There has been a small advance, the rate closing 3/11/4 for 6 months' sight credit drafts. Exports from the Straits for 1876 to the United States, total to September 30, 30,789 piculs, against 40,690 in 1875, 28,349 in 1874, 49,681 in 1873, 45,949 in 1872, 40,581 in 1871, and 45,113 in 1870.

(Aitken, Spence & Co.) (Gillfillan, Wood & Co.)

to induce dealers to resume mining operations, at present v-ry much curtailed. Shipping.—The Qura is now filling up, and will be ready in a few days. Another small vessel is required for early November loading. Exchange is steady, with an upward tendency, closing rates being 1/8½ for credits, and 1/8½ for documents. Bank selling rate 1/8½. Cost of Plumbago free on board, without freight, exchange calculated at par, and cleined, per ton—Lump, 300/; Chip, 1897, Dust, 125. Distribution of Plumbago from Oct. 1-t, 1875, to Sept. 30, 1876: to England, 72,600 cwts.; to Marseilles, 325; to Trieste, 362; to Australia, 205; to America, 56,309; total exports, 129,801 cwts.

ARGENTINE REPUBLIC.

BUENOS AYRES, Oct. 13, 1976.—Copper and Lead.—
The annual preduction, according to the latest estimates within our reach, amounts to about 800 tons of Copper, and about 1176 tons of Lead. With suitable machinery, skilled labor and cheap money these returns we may fairly assume would be more than doubled. Unlike most other mineral producing countries, the Argentine Confederation is rich in nearly every kind of metal—gold, silver, Copper, Lead, Nickel, Iron, Tin, Antimony, Cobalt, etc. Petroleum springs and Coal beds of good quality and large extent also exist; but from the same causes, scarcity of labor and capital, they only supply a local demand, which will not compensate for working outlay. Argentine mine owners, as a rule, are not capitalistiss, except to a very limited extent; hence nearly all their operations are carried on without proper appliances, and only in accordance with the most primitive systems. In passing through the mining districts one meets everywhere mines abandoned at the very moment when the labor and outlay expended on them were bedinning to yield a liberal compensation, simply because the owners funds ran low, or because the workings had gradually filled with water, which his small staff of untrained peons could not keep under. Latterly some advances have been made toward a more improved system of mining, as is exemplified in the establishments of Treolar, in San Juan, and Don Antonio Fraguiero's, in Cordoba; but these isolated efforts only show in a still stronger light how much more could be done if more general attention were devoted to this important industry. (Diario.)

Our English Letter.

Review of the British Iron, Steel, Metal and Hardware Trades.

> (From our Regular Correspondent.) SHEFFIELD, ENG., Nov. 12, 1876. THE EASTERN CRISIS

has now become grave in its incidence, and

there is a very general expression of opin:on to the effect that it is hardly possible for war to be avoided. In speaking on the 9th instant at the banquet of the Lord Mayor of London the Earl Beaconsfield (better known to fame as Mr. Benjamin Disraeli), was very emphatic in his language, saying that England would abide by the line of conduct hitherto pursued, and that if she once entered the field she would not cease at the end of one campaign, but would never cease fighting until right should be dene. This may have been one of Dizzy's oriental 'effects," but, whether such was the case or not, the speech has had a great weight, not only here but on the Continent. The Czar of Russia has evidently read a report of the speech just alluded to, and he, too, has given vent to ertain statements which are of an eminently bellicose nature. The occasion was an address from the Communal Council of Moscow, and the place an ancient hall in that city. His majesty, in mellifluous language, thanked the deputation, and, after some little preface, said that the interests of Russia were desrer to him than anything, and should a general agreement not be arrived at by the powers at the forth-coming conference, for "carrying out what we have a right to demand from the Porte, I am firmly determined to act independently, being convinced that the whole of Russia will respond to my summons, should the honor of Russia require it." Now, if this language means anything it means war, and that, too, before long. So convinced is the world of this that the markets to-day are in a state of scare, and business is daily feeling the restriction of the suspense. The question everybody asks, under the circumstances, is,

WHAT WILL ENGLAND DO ?

what will england do?

and so far as my own observation goes no answer of a satisfactory kind is forthcoming. There are all sorts of rumors in circulation. One sapient authority says he knows definitely that Malta is provisioned and armed for a garrison of 7000 men for two years, and Gibralter for 5000 men for the same period. Then another equally wise personage, who alleges "high military authority" for his information, says the British government has its plans all cut and dried, that the militia and volunteers (about 400,000 men) are to be mobilized, and that an army of 50,000 British regulars are to be landed at Varna in the rear of the Russian advance on Constantinople. There are other rumors affecting to give details of the occupation of Exptp. &c., all doubtless exceedingly untrustworthy and premature. I have previously expressed an opinion that the people of this country are all "fired up" against Russia, just as they were after the conclusion of the Unkiar treaty, at the partition of Poland, at the violation of Cracow, and at the Moldavian "protection" epoch. Personally, I ardently hope for peace, but I am bound to record the fact that a war with Russia would be most popular. Great Britain, like France, must fight every now and then. In the meantime, the atmosphere is thick with rumors of

RUSSIA'S WAR PREPARATIONS.

RUSSIA'S WAR PREPARATIONS, and we hear of most gigantic armaments being prepared in all parts of the empire. The Muscovite fleet is wintering at Naples, the Battic being now closed to friends as well as foes by King Frost. A Vienna letter tells us that the export of horses is prohibited by the Czar's government, and that from St. Petersburg and Moscow trains are daily running to the Black Sea districts with troops, arms and ammunition. At St. Petersburg itself 40,000 additional nen and 6000 extra horses are being put into garrison. Every artillery brigade has received sixty miles of telegraph line wire with the necessary batteries, &c. At the fortifications of Kertch, Yenikale, Odessa, Sebastopol, and Otschahoft, thousands of men are working night and day. In short, the great Bear is making every possible effort to give his dear friend the British Lion an exceedingly "warm reception." reception.

"A PUFF DISSIPATED."

The No charters have been made for the United States couring the past fortnight, and the New York and Boston berths are vazant. Exchange.—There has been a small advance, the rate closing 3/11½ for 6 months' sight credit drafts. Exports from the Straits for 1866 to the United States, total to September 30, 30,788 picuis, against 40,609 in 1875, 28,349 in 1874, 29,656 in 1873, 45,949 in 1872, 40,881 in 1871, and 45,113 in 1870.

(Aitken, Spence & Co.)

Colombo, October 13, 1876.—Plumbago.—We have nothing new to report. Higher offers from the contuming markets would appear to be indispensable to induce dealers to resume mining operations, at present very much curtailed. Shiming.—The Ouns.

may be spurred on by envy, harves and malice, in calling attention in its wicked, wagg sh way, to the charming little story. I am not going to presume to sit in judgment upon a man who writes from the very axis of this great country—which central spot is, I tremblingly suppose, Wolverhampton, Birmingham, or "somewhere thereabout"—but I will quote some few passages of the Engineer's comments. The Manu facturer's statements, I may remark, had gushing and glorious reference to the Danks patent furnace. Thus saith the Engineer:

"Save me from my friends!" We do not know whether Mr. Danks has quite said this, but if any man is likely to suffer from the effects of trop de zele, Mr. Danks should be the man. That he should be a party to the dissemination of puffs, such as the outrageous specimen we reprint in another place, we do not believe, but we can hardly be expected to extend that indulgence to his whole army of supporters. Fortunately, perhaps, the absurdity of the puff or scare, whichever is intended, is so great, that its effects must be correspondingly small; still, there are no doubt many American inventors and manufacturers who may take all that comes from an English correspondent on English patent laws as, at least, generally true, and in the cause of common honesty they should be warned of their mistake. We have had statements in the English press to the effect that the Solicitor General had pronounced in favor of the claim of Mr. Danks to the method of cooling furnaces by water; but so far as we have seen these statements, they have not been inconsistent with the existence of a written opinion given by the Solicitor General not been inconsistent with the existence written opinion given by the Solicitor General in his private capacity. In the States, however, the public is gravely informed that 'the Solicitor General, by our new Patents Act, is appointed a tribunal in such matters from which there is no appeal; 'that 'the case was fully debated in a court over which the Solicitor General presided,' and so forth. Many a man would be glad, no doubt, if there were a 'new patents act'—our 'new' act is 24 years old—by virtue of which a Solicitor General might hear written opinion given by the Solicitor General

his cause 'fully debated in court,' and then decide in his favor without the possibility of appeal. Mr. Danks's friends would be very glad, without a doubt, to be confirmed so easily in the enjoyment of a claim, but to wish for such a result, and to proclaim its consummation as a fact, are two very different matters. Now, how bug a mouse can we find for all this mountain? A very little fellow after all. In the month of August last Mr. Danks applied for leave to enter a disclaimer of certain portions of the specification of the patent granted to him in 1898, No. 370. He was advised that the removable portion of the flue, which fronts the rotary refinery, and which serves by turns as a flue and a door, was not new, 'although,' as he takes care to say, 'the particular construction, of 'the said removable portion, as described in the said specification, with cellular chambers or their equivalents, for the purpose of keeping the said removable portion cool, by the introduction of water within the said chambers, was novel, and had never been known before.' The disclaimer was allowed without difficulty, and its effect is simply to abandon as part of the invention the removable flue as such. This is the whole foundation for the ingenious narrative of our contemporary. The story about the cause having been debated in court is a pure fiction. Application of this kind are heard in the Law Officer's chambers, and in this particular case there was absolutely no opposition whatever. So much for the interest of English patentees in this matter. The plot has been most ingeniously laid. Mr. Danks' agent introduces a recital to the effect that the cooling device is novel; the law officer allows the disclaimer, therefore, say the persons interested, the law officer guaranteed the truth of the recital. Mr. Danks may rejoice in the belief that bis claim is valid, but whether it is valid or not—a matter we do not pretend to decide, and which is readed the mark now—must remain for the decision of a court of law. How careful a cournal his cause 'fully debated in court,' and then deis beside the mark now—must remain for the decision of a court of law. How careful a journal need be in the selection of its informers this instructive little story will show." THE CENTENNIAL.

The Leeds Mercury, one of our very best provincial journals, in concluding an appreciative leader anent the close of the Centennial, says:
"No nation has striven more cordially to make the Philadelphia Exhibition a success than Engthe Philadelphia Exhibition s success than England has done, and if we are to trust the reports which reach us from all quarters, no nation has met with a more generous response from the American people. There has been no doubt as to the sincerity of our co-operation, nor as to the warmth of our sympathy and good will. The hand we held out has been fervently grasped, and at the closing banquet on Thursday, as on the occasion of the presentation of the awards, the English Minister and the English Commissioners met with a reception which lish Commissioners met with a reception which left nothing to be desired. The Exhibition has wiped out the last traces of misunderstanding between the two nations; and it is this, rather than the 10,000,000 visitors who have thronged its courts, which constitutes its noblest success."

BIR WILLIAM PALLISER'S PATENTS.

After a long argument before the judicial committee of the Privy Council, that body has decided to extend Sir W. Palliser's patent for chilled projectiles for a period of seven years and for screw bolts for five years, on the condition that no royalty should be charged to the government for the manufacture of articles for their use.

SERIOUS FIRES.

On Thursday last two men were killed and others injured at the Wheat Sheaf Colliery, Lancashire, belonging to Andrew Knowles & Co. (Limited), owing to the wire winding rope being burnt through by a fire which raged in the engine house on the surface. The rope, consequently, fell down the shaft and killed the two men who were about to ascend. On Saturday evening the oil and tailow refinery of Measrs. Bancroft & Co., of Edmund street, Liverpool, was destroyed by fire, the damage being \$50,000. There were also five other fires in Liverpool the same evening.

THE WEEK'S EXPLOSIONS have been rather comprehensive. Near Exeter 300 casks of petroleum blew up on board a barge in the river Exe, one man being badly hurt. At the Wesbur Colliery, Wrexham, three men have been killed by an explosion. At the Brynmally Pit another man was similarly killed, and another at Plaskynasion Colliery, Ruabon. At the Welthew House Colliery, near Wigan, five men were dreadfully burned and not fewer than 14 horses killed on Friday by an explosion of fire-damp, liberated by the process of blasting. In the last case all the men will probably die. The pit was, as is usual in these cases, thought to be singularly free from gas, so that blasting would doubtless be pursued in a very thorough manner. THE WEEK'S EXPLOSIONS

FAILURES.

FAILURES.

Amongst the chief failures of the week I note the following: W. R. Ireland & Co., manufacturers, Dundee, liabilities £20,000; Peter Parry & Co., merchants of Birmingham and Paris, liabilities £30,000, and assets, £4000. W. Newbound, Leeds, bill discounter, &c., Habilities £12,000, and W. J. Hendry, of Finsbury, London, owing £6000.

don, owing £6000.

FOREIGN COMMERCIAL TREATIES.

The Foreign Office authorities write to the secretary of the British Iron Trade Association that there is every reason for believing that the present duties on Iron entering Germany will cease from January 1st next. It is also reported that the Austro-Hungarian government will terminate the existing treaty with this country on December 31st, but the French government has not yet given notice for terminating the treaties of 1860 and 1873.

OUR OCTOBER EXPORTS.

OUR OCTOBER EXPORTS.

The Board of Trade returns for the month of October are again of a depressing nature, and show a large comparative falling off of business. show a large comparative falling off of business. Pig iron exports increased 2000 tons; tin plates, 500 cwts.; wrought copper, 1000 cwts, telegraphic apparatus by £180,000; unwrought tin, 1000 cwts., and coal nearly 2000 tons. There was, however, a falling off in the following articles of the stated respective quantities or values; angle, bolt or rod iron, 5000 tons; railroad iron, 3000 tons; hocps, sheets and plates, 100 tons; cast or wrought iron, 7000 tons; old iron, 1000 tons; unwrought steel, 110 tons; hardware and cutlery, £70,000; machinery and mill work, £32,000; miscellaneous machinery, £100,000; unwrought copper, 8500 cwts.; yellow metal sheathing, 400 cwts., and lead 800 tons. The following figures show the comparative values of the exported iron and steel for October, 1875 and 1876:

October, 1010 au	W TOIL				The state of the s	
n	BON AN	D STEEL	da		hand at New York and Boston having been greatly diminished within the past month.	
		nth ende	d October	r 31. 1876.	There is also a manifest alteration for the bet-	1
0		Value.	Quantity		ter in some of the South American markets,	
•	Tons.	£	Tons.	£	particularly in Brazil, a country which in ordi-	
Pig fron	96,697	336,191		290,582	nary times is one of our best customers. On	1
Bar, angle, bolt					the continent of Europe the outlook is of a	1
bos bea	24,677	231,649	91,787	178,055		
Railroad	40,739	393,405	37,728	314,304	troubled state of the East; nor can it be	ł
Wire	4,702	79,794	4,344	67,241	reasonably expected to take any turn for at	
Boiler, armor						1
plates, &c		292,409	18,716	256,788	least a couple of months.	
Tin plates	10,385	946,557	10,856	227,947	Some of the African markets are also dis-	
Cast or wrought		830,901	19,952	347,129	turbed, although buyers of goods suitable for	
Old for remanu-					the Cape are just now purchasing with toler-	1
facture	2,367	6,083		11,213	able freedom. Australia is yielding a fair com-	1
Unwrought steel.	9,580	93,483	2,470	81,626	plement of orders, and is justly looked upon	
Manufactures of					as being in almost all respects likely to become	
steel and iron	990	69,555	976	69,061	one of our very best customers as the popula-	
	240.000	0.000.000	048 010	1 000 000		1
Total	319,078	3,080,107	310,919	1,863,876	tion becomes denser.	

HARDWARE AND	CUTLE	RY.	
	Month		lues.
То		1875. £	187 £
Russia		9.812	7.9
Germany			20.8
Holland			7.6
France			12.2
Spain and Canaries			11.4
United States			26.5
Spanish West India Islands			5.4
			20.5
Brazil			
Argentine Republic			2,0
British North America		18,700	13,5
British India		26,638	25,7
Australia			46.9
Other countries			90,9
Total		363,498	291,9

has been steady and firm, warrants being now 57/10 to 58/. Last week's shipments reached 9384 tons, against 10,531 in same week of last

year.
Messrs. James Watson & Co.'s report gives

the following	g quot	atio	08	2				
						- 2	No. 1.	No.
G. M. B., at	Glasgo	W			 		58/9	17
Gartsherrie.	60						65/6	57
Coltness,	+6						69/6	58
Summerlee,	4.6						64/	57
Langloan.	6.6						66/6	58
Carnbroe,	6.6						60 /6	57
Calder, at Po	rt Dune						65/6	58.
Glengarnock,							64.	58.
Eginton,	83	. 0000					58/6	56.
Dalmellingto	n. 69						58/6	56.
Shotts, at Lei							65/6	58.
Kinneil at B								54

struction put upon the news regarding foreign politics has not had its usual effect on our market, being more than counterbalanced by the growing disinclination of makers and other holders to sell freely, and the inclination shown by consumers to buy iron against their requirements."

	Delive	erable along	side.
		No. 1.	To. 8.
7	G. M. B., at Glasgow	. 59/	57/
-	Gartsherrie "		58/6
٤l	Coltness, "	71/	59/6
-	Summerlee, "	64/6	58/
0	Langloan, "	67/	58/
8	Carnbroe, "	61/	58/
	Monkland, "	59/	57/
5	Clyde, "	60/6	57/6
r	Govan, at Broomielaw	59/	57/6
1	Calder, at Port Dundas	66/	58/
			58/6
	Eglinton, "Dalmellington,"	59/6	57/
- 1	Dalmellington,"	59/6	57/
- 1	Carron, at Grangemouth	68/	62/6
1	" specially selected	70/	
â	Shotts, at Leith	65/6	58/6
	Kinneil, at Bo'ness	59/6	55/
r	Bar Iron	£7 to £7.	10/
6	Nail Rods	£8	
-	SHIPMENTS.		
8	SHIFMANIS.	η	Cons.
r	Week ending Nov. 11, 1876.	1	0,715
	" Nov. 13, 1875	1	0,003
1	Increase	6	52

CLEVELAND PIG IRON. CLEVELAND PIG IRON.

The monthly returns of the Cleveland ironmasters show an increased make of pig iron of
8077 tons, an increase of foreign shipments of
4903 tons, and coastwise of 8658 tons. The
stock is now 140,658 tons, a decrease in the
month of 5132 tons, and an increase in the warrant stores of 3393 tons. The month's make
was 171,082 tons by 110 furnaces, the total
production of the district for the ten months
having been 1,725,499 tons.

ALLEGED NEW IRON RAIL.

ALLEGED NEW IRON RAIL.

Various statements which have been going the round of the papers here as to alleged suc-cessful experiments at Middleboro' in the production of a new homogeneous iron rail, which "will be £1 per ton only dearer than orwhich "will be 21 per ton only dearer than or-dinary fron ralls, and as effective as steel," are all—moonshine. No such experiments have as yet been made, although likely to be shortly at Bell Brothers' Port Clarence works, and, there-fore, the whole thing is an invention, made particularly absurd by the fact that steel rails are now only 25/dearer than iron!

GUNS versus ARMOR.

The Italian gunnery trials have caused a good deal of consternation here, because they deal of consternation here, because they show all our iron-clads to be things of the past in the face of such ordnance. Already our arsenal authorities are preparing to construct a 150 ton gun, and have the four 81 ton guns nearly finished for the Ioficxible. These large guns are all on the Fraser thick coil system, with groove rifling and a gas check arrangement to "spin" the shot. The armor plate makers here are also looking about them for "something" efficacious.

TRADES OF SHEFFIELD.

There is on the whole a quiet tone prevalent in trading circles generally, it being tolerably clear that no great, or indeed even moderate, revival of trade can take place during the present year. There are, notwithstanding, several branches of trade in which the amount of work now in hand is very considerably in

present year. There are, notwithstanding, several branches of trade in which the amount of work now in hand is very considerably in excess of what was anticipated a couple of months ago, and a supply of orders which will certainly afford employment up to Christmas. These favorable exceptions, however, are not, as a rule, to be met with in the iron or steel industries. They are chiefly in the lighter trades, which almost invariably experience a spurt at this season of the year, no matter whether trade be good or indifferent, of some proportions or other.

In the heavy iron trade the inquiries which have come to hand during the past two or three weeks have been of a nature leading to the belief that in the immediate future there may be an increment of work which will be of a most valuable kind. This view of a forthcoming improvement is supported by the known facts that in several parts of the country there are works planned or in contemplation of considerable magnitude, the construction of which must afford some encouragement to the iron and allied industries. From America, too, our latest advices are of a much more cheerful nature, the stocks of iron and hardwares in hand at New York and Boston having been greatly diminished within the past month. There is also a manifest alteration for the better in some of the South American markets, particularly in Brazil, a country which in ordinary times is one of our best customers. On the continent of Europe the outlook is of a much less cheerful nature, owing to the troubled state of the East; nor can it be reasonably expected to take any turn for at least a couple of months.

fairs is not quite satisfactory in relation to for-eign competition in railway materials and some classes of hardware. In tres, for instance, the Belgian competition is very keen, even in this immediate neighborhood, tires of Belgian make

immediate neighborhood, tires of Belgian make having within the week been sold at £9.5/per ton delivered, which is at least £1.10/under what our own manufacturers consider to be a fair price for those articles.

The same foreign producers are also doing a good business in railway springs of all kinds except for locomotives, at prices which are materially below the quotations of the numerous manufacturers here.

manufacturers here.

There is a somewhat improved demand for There is a somewhat improved demand for files of almost all kinds, although in saw files and other small descriptions the competition of some of the Lancashire houses is rather keenly felt in the home trade. Most of the revived inquiry is due to the wants of France, Russia and Australia, Canada, with a few other leading colonies. I hear that some of the file manufacturers are cutting prices so extremely fine that they are only making a few pence per dozen profit. dozen profit.

Cutlery is in fair request for the home, Australian and North American markets. BIRMINGHAM AND STAFFORDSHIRE

BIRMINGHAM AND STAFFORDSHIRE.

The iron trade is quiet but rather firm in South Staffordshire at about the following quotations: All mine pigs, £3, 15/ to £4, 10/; boiler plates, £10 to £11; common sheets (singles), £9 to £9, 10/; good sheets (singles) for working up, £9, 15/ to £10, 10/; common bars, £7 to £7, 10/; branded bars, £9 to £9, 12/6; hoops, £8 to £9; thin rods, £10 to £11; fancy rods, £8, 10/ to £9, 10/, and puddled bars, £5, 10/. Belgian girders, 12 inches thick in the flange and all cut to dead lengths, are being delivered in Birmingham at £8 per ton—fully £2 per ton less then any producer in South Staffordshire would undertake them for on the spot, to say nothing about the cost of on the spot, to say nothing about the cost of carriage! In the hardware trades there is a fair quantity of work in course of execution, especially for season goods, such as gas fittings and the like.

SOUTH WALES AND MONMOUTHSHIRE.

At Rhymney Works a Brazilian order for 16,000 tons of iron rails is in hand. Dowlais has sent off a small rail consignment to Palms, has sent off a small rail consignment to Palma, and Insole bars to Pslermo. Landore has sent 1237 tons of steel rails to Rockhampton. At Cyfarthfa, Mr. Crawshay has stored up several hundred thousand tons of beat Welsh from mine pig, which is said to improve by exposure. At Dowlais, also, there is an enormous stock of iron and steel on hand. At Nantyglo and Blaina the works are to be restarted. The importation of iron ore from Spain into Welsh ports is now being carried on somewhat freely. ports is now being carried on somewhat freely.

THE METAL MARKETS

have been firm, and in some items prices have have been firm, and in some items prices have gone up.

Von Dadelszen & North report: "Copper active and dearer. A large quantity of Chilibars has changed hands, both on the spot and arrival. The price has advanced from £76. 10/to £78. 10/for g. o. b., and to £79 for special brands. In ores and regulus four cargoes of the latter were sold at 16/per unit. In Australian copper, Wallaroo, which is very scarce, has improved to £87, and Burra, £85 to 10/. English, both raw and manufactured, has an upward tendency, and prices are about £31 above last week's quotations. Tough, £34 to £35; select, £35 to £36; strong sheets, £38 to £30. Tin has further improved in value. A larger business would have been done in Straits had it been more offered; as it is, several hundred tons have chunged hands as it advanced from £74, 10/ to £77 spot, for arrival and for forward delivery. More business has been done in Australian at from £78, 10/ to £75, 10/, and even £76 at the close. Benca in Holland.

vanced from £74. 10/to £77 spot, for arrival and for forward delivery. More business has been done in Australian at from £73. 10/to £75. 10/, and even £76 at the close. Banca in Holland, 46 fl.; Billiton, 45 fl.; English ingots, £81. "The last Trading Company's sale this year has been announced for the 29th instant, and will consist of £9,600 slabs Banca and 3500 slabs Billiton. Tim Plates.—Although no improvement has actually taken place, the demand appears to be more active. Lead very firm at an improvement of 5/per ton. Good soft English pig, £22 to £23. 5/, and Spanish soft, £21. 12/6. Spelter.—No business officially reported; the prices remain the same as last week; ordinary brands Silesian, £22. 15/ to £23. Quicksilver has been advanced from £8 to £9. 10/per bottle."

The Mining Journal remarks: "Copper.—Today the market opened firm, and £78. 10/ to £89 was realized for g. o. b. The position of the market, according to present appearances, is very good, but how long it will hold is quite another question. There are two features rather against any further rise—an increased stock and heavy charters. When once speculation sets in it is always difficult to discern how far it will be carried. The speculative purchase must show a very fair margin of profit, and holders would do well to secure it, and not hold on too long until the present feeling has exhausted itself. Wallaroo has advanced to £87, and Burra Burra to £85, 10/. The market closes steady for all descriptions, and if the present feeling continues higher prices may follow. Lead.—The tendency of the market has been toward higher price s, and sellers are now mostly quoting 5/per ton advance upon last week's prices. Spelter.—No change is reported in this metal. Zinc is 5/dearer. A public sale of 100 tons, English menufacture, realized £26. 10/on Thursday. Quicksilver.—The price has been slightly variable, business having been done at £9 and £9. 10/per bottle. Only small quantities can be bought at £9."

Additional Awards—Centennial Exposition.

Exhibition) Used by the Bureau of Ma chinery.

Jagu, Russia, Automatic Feeder, No. 4

Mr. Jagu, Russia, Automatic Feeder, No. 4
Boiler House.
Josiab Gates & Son, Lowell, Mass., 30° Double
Leather Belt, No. 5 Line Shaft.
J. B. Hoyt, New York, 30° Double Leather
Belt, No. 7 Line Shaft.
G. S. Fales, Pawtucket, R. I., 30° Double
Leather Belt, No. 1 Line Shaft.
Anton Heims, New York, 30° Double Leather
Belt, No. 6 Line Shaft.
Rougess & Son, Pawtucket, R. I., 30° Double
Leather Belt, No. 8 Line Shaft.
Alexander Bros., Philadelphia, 30° Double
Leather Belt, No. 8 Line Shaft.
Chas. Schieren, New York, 30° Double Leather
Belt, No. 4 Line Shaft.
Page Beiting Co., Concord, N. H., 30° Double
Leather Belt, No. 2 Line Shaft.
The Gutta Percha and Rubber Mfg. Co., New
York, 2-30° Rubber Belts and 4000 feet of
Rubber and Boyd Cotton, Rubber-Lined
Hose, Saw Mill and on Reels.
The New York Belting and Packing Co., Philadelphia, 32° Rubber Belt, Hydraulic Annex.
Thos. J. Rorer, Philadelphia, Union Belt. No.
3 Annex.
Knowles Steam Pump Works, New York,
Pumps, No. 3 Boiler House.
Philadelphia Hydraulic Works, Philadelphia,
Pumps, No. 6 Boiler House.

Niagara Pump Works, New York, Pumps, No. 5 Boiler House. Blake Mfg. Co., New York, Pumps, No. 4

Bake Mfg. Co., New York, Pumps, No. 4
Boiler House.
Carr, New York, Pumps and Ash Hoister,
Nos. 1 and 2 B iller Houses.
Itchburg Machine Co., Fitchburg, Mass.,
Lsthe and Drill, Machine Shop.
B. Smith, Smithville, N. J., Wood-working
Tools, Machine Shop.
F. Frentice & Co., Worcester, Mass., Lathe
and Drill, Machine Shop.
J. Barr, Philadelphia, Steam Traps, on all
Steam Pipes.

Steam Pipes.
Lidgerwood Manufacturing Co., New York,
Ash Hotsters, Nos. 2, 3, and 4 Boiler Houses,
R. V. Pratt, New York, Injector, No. 3 Boiler

W. D. Andrews, New York, 50 H. P. Boiler and Pumps, No. 4 Boiler House and Pump Annex. Abendroth & Root, New York, 100 H. P. Boiler,

No. 3 Boiler House. Steam Generator Manufacturing Co., Philadel-phia, 100 H. P. Boiler, No. 4 Boiler House. Babeock & Wilcox, New York, 150 H. P. Boil-

phia, 100 H. F. Bolley, New York, 150 H. F. Bolley, No. 3 Boiler House.
Harrison Boiler Works, Philadelphia, 100 H. P. Boiler, No. 4 Boiler House.
Exeter Machine Works, Boston, 75 H. P. Boiler, No. 8 Boiler House.
W. E. Kelley, New Brunswick, N. J., 50 H. P. Boiler, No. 3 Boiler House.

der, No. 3 Boiler House. Lynde, Poiladelphis, 50 H. P. Boiler, No. J. D. Lynde, Thise.

4 Boiler House.

The J. C. Hoadley Company, Lawrence, Mass.,

80 H. P. Boiler and Engine, Machine Shop.

C. B. Miller, Philadelphia, 50 H. P. Boiler, No.

B. Miller, Financipini, 30 H. F. Boller, No. 4 Boiler House.
D. Smith, Boston, 100 H. P. Boiler, No. 3 Boiler House.
owe & Watson, Bridgeport, Conn., 50 H. P.

Boiler, No. 3 Boiler House. P. Mast & Co., Springfield, O., Two 200 H. P. Anderson Boilers, Saw-mill and Agricultural Hall.

tural Hall.

Baxter Steam Eugine Co., New York, Boiler and Engine, Nevada Building.

J. C. Bowser & Co., Fort Wayne, Ind., Boiler and Engine, No. 6 Boiler House and Shoe and Leather Building.

The Pierce Rotary Boiler Company, New York, Boiler, No. 5 Boiler House.

George H. Corlies, Providence, R. I., Eight Boilers, No. 2 Boiler House.

Bollers, No. 2 Boiler House.

George H. Corlies, Providence, R. I., Eight Bollers, No. 2 Boiler House.
Howard Savety Boiler Company, Boston, 100 H. P. Boiler, No. 3 Boiler House.
Joseph Firmenich, Buffalo, N. Y., 100 H. P. Boiler, No. 4 Boiler House.
Williamson & Bro., Philadelphia, Portable Hoisting Engine, No. 4 Boiler House.
Jones & Laughlins, Pittsburgh, Pa., Shafting, Hangers and Pulleys, Machine Shop.
Yale Lock Company, Stamford, Conn., Three-Pulley Blocks and Falls.
Stephen's Patent Vise Company, Vises, Machine Shop.
Keystone Portable Force Co., New York, Four No. 6 Power Forces, Machine Shop.
Keystone Portable Force Co., New York, Four No. 6 Power Forces, Machine Shop.
Risher & Norris, Treaton, N. J., Anvils and Vises, Machine Shop.
Riehle Bros., Philadelphia, Testing Machine for Rubber and Leather Belting and Scales.
Stillwell & Bierce, Dayton, O., Heater, No. 4 Boiler House.

Boiler House. Cook & Pulver, New York, Lubricators, An-

nexes.
Crane Bros., Westfield, Mass., Belts (paper),
Counterline from No. 1 Shaft.
John Hanmore, New York, Patent Combination Felting, Main Steam Pipes from No. 4

tion Felting, Main Steam Pipes from No. 4
Boiler House.

C. M. O'Hara, Boston, Patent Ash Felting,
Main Steam Pipes from No. 4 Boiler House.

H. W. Johns, New York, Asbestos Covering,
Main Steam Pipes from No. 4 Boiler House.

Che Chalmers Spence Co., Philadelphia, Asbestos Boiler Covering, Main Steam Pipes
from No. 4 Boiler House.

Cohn T. Sheuster, Philadelphia, Improved FeltIng, Main Steam Pipes from No. 4 Boiler
House.

House.

D. N. Snyder, Philadelphia, Felting, Main Steam Pipes from No. 4 Boller House.

M. B. Edson, New York, Steam Gauges, Boiler

M. B. Edson, New York, Steam Gauges, Boiler House No. 3.
James Woodruffe Rahway, N. J., Two Dampers, Boiler Houses No. 3 and 4.
American Twist Drill Co., Woonsocket, R. I., Emery Grinding Machine, Machine Shop. F. S. Pease, Buffalo, N. Y., Oil, Lubricated all Shafting during Exhibition.
H. S. Lansing, Philadelphia, Safety Railroad Gate, on Narrow Gauge Railroad, Belmont avenue.

Nathan & Dreyfus, New York, Oil Cups, Ma-chinery Building. J. E. Mitchell, Philadelphia, Grindstones, Ma-

chine Shop.
W. H. Lawrence, Brooklyn, N. Y., Safety Oil Cans, Machinery Building.
American Oil Cabinet Co., Boston, Oil Cabinets,

American Oil Cabinet Co., Bocton, Oil Cabinets, Macbinery Building.

Amoskeag Mfg. Co., Manchester, N. H., Fire Engines, in Engine House.

Silsby Mfg. Co., Seneca Falls, N. Y., Fire Engines, Pump Annex.

B. S. Nichols & Co. (Gould Engine), Burlington, Vt., Fire Engines, Pump Annex.

L. Button & Son, Waterford, N. Y., Fire Engines, Machinery Building, S. C.

Morse Twist Drill Co., New Bedford, Mass., Two Sets of Taps, Dies and Drills, Machine Shop.

Shop. Galloway Boilers, England, Boilers, No. 1 Boiler Hous

House.
Aveling & Porter, England, Road Engines,
British Section, Machinery Building.
Appleby Bros., England, Cranes, British Section, Machinery Building.
Green, England, Economizer, No. 1 Boiler House. Buckeye Engine Co., Springfield, Ohio, Engine,

No. 3 Annex. Hampson & Whitehill, New York, Engine, No. Report of Special Group on Machinery (of Hartford Steam Engine Co., Engine, No. 1

Acnes.

Wickersham & Bro., Philadelphia, Oil Feeders,
Nos. 1, 3, 5, 7 Line Shafts.

C. Brown, Fitchburg, Mass., Engine, Saw Mill. Wells Balance Engine Co., New York, Engine, Saw Mill.

Frank Pearn & Co., Eugland, Steam Pump, No. Frank Pearn & Co., Eugland, Steam Pump, No. 1 Boiler House.
The Blake Hose Co., 3600 Feet Hose, on Reels. Armstrong Heater Co., Toledo, Ohio, Heater, No. 6 Boiler House.

Ashcroft Steam Gauge Company, Steam Gauge, No. 4 Boiler House, and trials of Fire Engines.
Fales & Jenks, Pawtucket, R. I., Dynamometers.

eters. B. Davis, Hartford, Conn., Heater, No. 5

Boller House.
Union Meter Company, Worcester, Mass.,
Steam Whistle, No. 3 Boller House.
Rider Life Raft, Fire Engine Trials on Lake.
Howe Scale Works, Scales. Buffalo Scale Company, Scales used on Fire Engine Trials.
Fairbanks & Ewing, Scales used on Boiler

Tests.
T. H. Risdon, Mount Holly, N. J., Friction
Brake and Apparatus for Testing Turbine
Water-wheels.
Ansonia Clock Company, Ansonia, Conn.,

S. Lleyd Weigand, Philadelphia, Apparatus for Testing Boilers.
onathan T. Pickering, Stockton-on-Tees, Differential Pulley Block.

Class IV. Buffalo Scale Co., Scale for Warehouse Pur-

poses. E. T. Fairbanks & Co., Scale and Scale Hopper. Knowies Steam Pump Works, Steam Pump. Niagara Steam Pump Works, Air Compressor

G. F. Blake Mfg. Co., Steam Pump. Group XIV.

Richardson & Boynton, New York, Improved

Group XV. W. C. Allison & Sons, Philadelphia, Patent Coupling for Iron Pipes ("especially for oil wells").

Group XVI. Winchester Repeating Arms Co., New Haven, Conn., Magazine Sporting Rifles. E. I. Du Pont, De Nemours & Co., Wilmington, Del., Powder.

Group XXI. Stacy Stone-dressing Machine Co., New York, Stone-dressing Machine. Lambertville Iron Works, Lambertville, N. J.,

Lathe Chuck. Group XXIII. Sheble & Fisher, Philadelphia, Hay and other Forks, and their Rakes.

Group XXV. Henry G. Lenhert, Philadelphia, Collection of Brass Instruments. Stevens' Institute, Hoboken, N. J., Education-

a. Establishment. Boston Piston Meter Co., Boston, Water Meter.

Group XXVI. Champion Iron Fence Co., Philadelphia, Iron

Drake & Wright, Chicago, Fire and Water Re-

Drake & Wright, Chicago, Fire and Water Abssisting Columns.
William Smith & Sona, England, Barnard Castle, One-Horse Machine for Cleaning Streets and Roads of Dust and Mud.
James L. Jackson, New York, Improvements in Construction of Stables and Fixtures.
J. B. & J. M. Cornell, New York, Iron-work

Gr Buildings.

W. C. Allson & Sons, Agents for Revolving Scraper Co., Philadelphia, Revolving Scraper for Removing Earth.

George Hayes, New York, Skylights, Ventilators, Leaders, etc.

Bundling Iron.

November 24, 1876. :
When the Iron Association introduced the new
system of prices it was considered an innovasystem of prices it was considered an innovation, but was an advance-step and has been accepted. At the same time, the work was only half done, as the old practice of putting up iron in bundles of the fractional part of the gross tou—112 lbs. and 56 lbs.—is still continued, instead of the fractional part of the ton now almost universally used, and which conforms to the decimal system of weights. The advantage of this needs no demonstration, and can be adopted as easily as the decimal rates. Will the Association adopt it, and confer a favor on every dealer in iron as well as themselves?

We commend the above to the consideration.

We commend the above to the consideration of the iron trade. Our correspondent's suggestion is a good one, and the reform he suggests would be attended with great converience to dealers, if not benefit to the consumer .- [Ed. Iron Age.]

Imitation Enamel for Iron .- The Trade Review says: F. W. Oliver has a process for this purpose; it consists in producing on Iron various designs of different colors, and imitating vitro-enamel in the following manner: A crystaline appearance is given to tinned iron by means of a mixture of water and sulphuric and nitric acids applied thereon, and afterward washed off. An impression of a design is made on suitable transfer paper, on which coatings of solid white and silver bronze dust and colors are applied. The plate prepared as above is coated with a mixture of turpentine and copal varnish; it is then heated and the design transferred thereon in the usual way, and the plate is baked and polished.

The foreign commerce of the port of New York for the nine months of the present calendar year was \$225,796,930, against \$275,416,060 in corresponding time in 1875.

BURRALL'S

Something New!

PAT. CORN SHELLER,

RIGHT HANDED.

We would call your attention to our New Pattern Right Handed Patent Burrall Corn Sheller, which we are now ready to place on the market. The Hopper is on the left side of the machine, as you face the crank, and can therefore be operated by the right and fed by the left hand, so that one man can both feed and work the Sheller. The wheels, boxes, &c., are the same as in our other Sheller, the only difference being in the sides, with which exception the repairs for one will fit the other. We manufacture the only genuine Burrall Sheller, and would warn the trade to look out for spurious machines. It will shell any size corn by regulating the spring in the Hopper. Hopper.

Get only the Burrall Sheller with our name on, and avoid trouble in getting repairs.

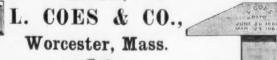
MANUPACTURED AND FOR SALE BY

THE COULDS MFG. CO.,

And 15 Park Place, New York City.

L. COES' Genuine Improved Patent

SCREW WRENCHES.





We myste the particular attention of the trade to our New Straight Bar Wrench, widened, full size of the larger part of the so called "reinforced or jog bar." Also our enlarged jaw, made with ribs on the inside, having a full bearing on the front of bar (see sectional view) making the jaw fully equal to any strain the bar may be subjected to.

These recent improvements in combination with the nut inside the ferrule firmly screwed up flush, against square, rolld bearings (that cannot be forced out of place by use), verifies our claim that we are manufacturing the strongest Wrench in the market.

We would also call attention to the fact,

that in 1869 we made several important im-provements (secured by patents), on the old wrench previously manufactured by L. & A. G. Coes which were at once closely imitated and sold as the Genuine Wrench by certain parties who seem to rely upon owr improvements to keep up their reputation as manufacturers, and although the fact of their imitating our goods may be good evidence that we manufac-ture a superior Wrench, we wish the trade may not be deceived on the question of originality. Trusting the trade will fully appreciate our recent efforts, both in improvements on the Wrench and in the adoption of a Trade Mark, we would caution them against imitations. None genuine unless stamped

"L. COES & CO."

Warehouse, 97 Chambers St., & 81 Reade Sts., N. Y. HORACE DURRIE & CO., Sole Agents.



NOVELTY COMB



THIS CUT ILLUSTRATES THE GRASPING OF THE COMB.



HAINES, 113 Cha

Silver's Patent Meat Stuffers.



Nos. I and 2. Single Ceared.

Capacity of No. 1, 6 lbs. Weight of No. 1, boxed, 30 lbs. Price, \$6 '(0. Capacity of No. 2, 9 lbs. Weight of No. 2, boxed, 40 lbs. Price, 9:00.

These Stuffers are placed upon the market in compliance with a lemand for a substantially constructed machine for use in families, notels, restaurants, and butchers doing a moderate business. Untke other small sized Stuffers, the barrels are made of heavy Galvanized Plate Iron (as are all our other sized Stuffers), securely riveted, and being in every particular of substantial construction, their unparalleled low prices, when quality is considered, must insure for them an extensive sale.



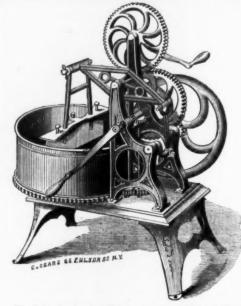
Weight of No. 3, boxed, 60 lbs. Weight of No. 4, boxed, 75 lbs.

BUTCHERS' SIZES.

This machine has been before the public for about five years, winning favor from Butchers and Sausage Makers everywhere. The reputation acquired has been almost without a parallel in the history of machinery. All the gearing being eneased the operator is not subjected to the annoyance of having his clothing soiled or caught. The crank shaft is provided with a pinlon, which, by a slight pressure noward, on the crank, is brought in line with the driving, or large wheel, giving the required power and slow motion for stuffing. When the crank chaft is drawn out, the pinion comes in line with the rack-bar, reversing the motion of the piston, throwing it out rapidly, without changing or reversing the motion of the erank. The piston head is provided with a self-acting valve, which serves to admit air instantly on its being reversed, removing the difficulty incident to withdrawing the piston with an air pressure behind it, and a vacuum in its front.

American Meat Choppers.

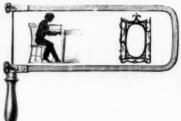
IMPROVED 1876. Iron Parts Malleable. No more Breakages.



The following is one of the many testimonials we are receiving on these goods:

Bailey Wringing Machine Co., New York.—Gentlemen: We understand you are the agents for the American Meat Chopper. We have one which we bought new of one of your men about five years ago—a No. 5. Have run it more or less every day since, three years of the time by steam power. Have chopped out three blocks and used up about the same number of knives. Otherwise the other part is just as sound as ever. We feel no hesitancy in recommending it as THE Machine. We need another new knife and can't get one made here to suit us. Please send us one for a No. 5 machine. Send by express, C. O. D., and oblige, Yours, respectfully, WHEATON BROS.

BAILEY WRINGING MACHINE CO., 99 Chambers St., N. Y.



We wish to inform Hardware Dealers throughout the country that we are putting up for the Christmas trade, in neat paper boxes, the following

One Highly Polished Spring Steel Bracket Saw Frame, with patent indestructible Clamps.

Six Saw Blades.

Fifty Designs, embracing a great variety of fancy and useful articles..

One Sheet of Impression paper, and One Brad Awl.

With full directions for using the Saw.

List price, per Box, \$1.25.

We have advertised these goods thoroughly throughout the country, and notified all interested persons that they could buy of the dealers at our regular rates. The demand for these tools is rapidly increasing, and some of them are in use in almost every town. They will sell in every hard-



Corner of Broadway.

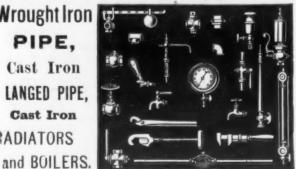




EATON, COLE & BURNHAM CO.,

Wrought Iron PIPE,

Cast Iron LANGED PIPE. Cast Iron RADIATORS

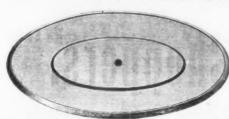


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MATERIALS.

STEAM GAUGES, TOOLS,

211 Water Street, N. Y.



of IRON CLAD, PLAIN ZINC, AND WOOD BOTTOM STOVE BOARDS

Prices and Dimensions of the Clipper, Portable Engine off of Wheels, on Cars a-Westminster.



Number Rev. per minute (3 speeds,) Diam. Fly Wheel. Diam. of Bol'er... Height lass Gauge, Stack, Heater of the state of the state of Portable, including above tachments. (Stack 2 feet.... \$300 \$325 \$350 \$385 \$550

O., General Agents, 213 N. Fourth Street, Philadelphia.

Pyrolusite Manganese MINERS, DEALERS AND EXPORTERS OF HIGH TEST

Crystallized Black and Cray Oxides of

MANGANESE.

gard to price and quality.

ALSO, MANUFACTURERS OF SUPERFINE FLOATED

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PURE WHITE LEAD, RED LEAD, White Lead (Atlantic), Red Lead, Linseed Oil



The Atlantic White Lead and Linseed Oil Company,

Litharge & Linseed Oil.
ROBERT COLCATE & CO.,
257 Pearl Street, New Yor

WETHERILL & BRO.,

White Lead, Red Lead, Litharge & Orange Mineral. Offices, 31st. St. below Chestnut, PHILADELPHIA.



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TRADE MARK.
Also Manufacturers of

Dipe, Bittings, &c.

McNab & Harlin Mfg. Co.,

BRASS COCKS AND VALVES

For STEAM, WATER

Iron Pipe and Fittings, Plain and Galvanized. PLUMBERS' MATERIALS.

New Illustrated Catalogue and Price List sent by express to the Trade on application.

Factory, Paterson, N. J.

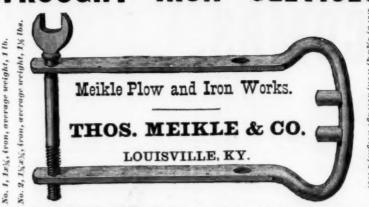
56 John Street N. Y.



Cuts Wrought Iron, Brass and Copper Pipes, Round Iron &c perfectly true without leaving burr on pipe contracting or splitting it. Cuts out a chip similar to a lathe tool. The knife may be removed and ground. Send for descriptive circular to manufacturers.



WROUGHT



MADE OF ROUND EDGE CHARCOAL IRON, ROLLED TO ORDER.

The Perfect Comb.

THE LAWRENCE COMB CO.

382 2d Ave., cor. 22d St., N. Y.



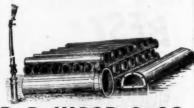
Closets, PUMPS, CABINET WOOD WORK, &c. 106, 108 & 110 Centre Street, ry, Mott Haven, . . NEW YORK.

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KNOX AND IMPROVED KNOX FLUTING MACHINES.

8 in., \$4 50; 6 in., \$3 00; 4 in., \$2 50. Extra Rollers.—8 in., \$2 25; 6 in., \$1 50; 4 in., \$1 25. Flutes.—10, 12, 15, 16, 21, 24, 27 & 30, less discount.— H. SAUERBIER'S SONS, 40 & 42 Mechanic St., Newark, N. J.



Cast Iron Pipe FOR WATER AND GAS.

Lamp Posts, Valves, &c., Mathew's Pat. Anti-Freezing Hydrants.



The New Double Screw Parallel "Leg" Vise.



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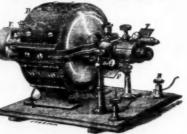
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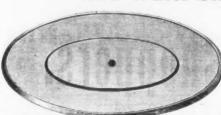
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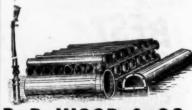


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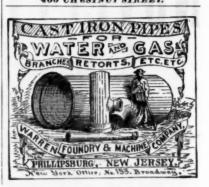
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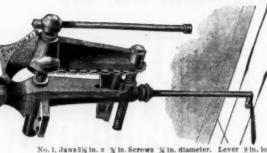


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. 2	Snepard Sidney & Co., Buffalo N. Y. Hardware Importers. Boker Hermann & Co., 101 Duane, N. Y. 28 King, Stigze & Co., 30 Chambers, N. Y. 19 Van wart & McCoy, 134 and 136 Duane, N. Y. Harr, Id F. W., 38 Chambers, N. Y. Windmulier Louis & Roelker 20 Reade N. Y. 11 Lardware Manufacturers.	Haskell W. H. & Co. Pawincket R.
. 2	King, Briggs & Co., 80 Chambers, N. Y	Lewis, Oliver & Phillips, Pittaburgh, Roseberry Geo. D., Pottaville, Pa. Russell, Birdsall & Ward, Port Chester Sheiton Co., Birmingham, Conn
.24	Harreld F. W., 78 Chambers, N. Y. Mindmuller Louis & Roelker 20 Reade N. Y. 13	Sheiton Co., Birmingham, Conn Sternbergn J. H., Reading, Fa Union Nut Co., 78 Beekman N. Y
. 5	Hardware Manufacturers. American Solral Spring Butt Co., 82 Beekman, N. Y., 36 Blake Bros. Hardware Co., New Haven, Conn., 37	
.16	American Soiral Spring Butt Co 82 Beekman, N. Y. 38 Blake Bros. Hardware Co New Haven, Conn 38 Barnett Oscar, Newark N. J. Biglin Philip S., 95 Reade, N. Y. Corbin P. & F., 87 Chambers, N. Y. Stretoriae Mg. Co Phila.	Oil Lubricating. Makers of American Natural Oil Co., 25 Cedar. 1 Les er Oil Co., 81 Maiden Lane, N. Y.
.23	Corbin P. & F., & Chambers, N. V. Enterprise Mg. Co., Phila. Hart. Bilven & Mead Mfg. Co. 248 Pearl N. Y. Miller a Fails Mg. Co., 24 Chambers, N. Y. Parr Geo., Buffalo, N. Y. Peers G. Webster, 110 Chambers, N. Y. Perin & Gaff Mg. Co., Chechnath, O. 11 Prast & Co., Buffalo, N. Y. Providence Tool Co., Providence, R. I. Russell & Erwin Mfg. Co., New York. 11 Unnon Mig. Co., 9 Chambers, N. Y. Van Wagoner & Williams & Beekman, N. Y. Wilson Mfg. Co., Okambers, N. Y. Wilson Mfg. Co., Okambers, N. Y. Wilson Mfg. Co., 9 Chambers, N. Y. 3	Cld Iron, etc. Gregg H L. & Co., 108 Walnut, Philad
.29	Miller & Falls Mfg. Co., 74 Chambers, N. Y	
.36	Perin & Gaff Mfg. Co., Cincinnati, O.	Blake Crusher Co., New Haven Ct., Patnts and Olis, Deaters in. Devoe F. W. & Co., 117 Fulton, N. Y. Pans, (Dripping and Bread,) Lewis, Dalzell & Co., Pittaburgh, Pa.
. 7	Providence Tool Co., Providence, R. I	Lewis, Dalzell & Co., Pittsburgh, Pa.
	Van Wagoner & Willfams 82 Beekman, N. Y	Patent Solicitors. A. V. Briesen, 258 Broadway, N. Y Howson & Son. Phila. and Washingto
.18	HARdware Specialities.	Pipes, Fittings, etc., Makers of.
.17	Hardy & Co., 102 Elm. N. Y. Jessup & Sterling, 7 and 9 Cliff, N. Y. Milwaukee Mfg. Co., Milwaukee, Wis.	Spencer A. H., 28 State Boston, Mass Pipes, Fittings, etc., Makers of, Eaton. Cole & Burnham Co., 58 John. McNab & Harlin Mfg. Co., 58 John. M Pancoast & Maule, 227 Pear. Phila.
6	Perin & Gaff Mig. Co., Cinemant, O. 1. Semple, Birge & Co., St. Louis, Mo. 3. Snepard Sidney & Co., Buffalo, N. Y. 3. Spencer & Underhill, 4 Beekman, N. Y.	Leighton Bridge and Iron Works, Ro
.24	Spenard Sidney & Co., Buffalo, N. Y. Spencer & Underhill, 54 Beekman, N. Y. Hinges.	waren John & Sons, Burington, N. Warren Foundry & Mach. Co., Philip Wood R. D. & Co., 400 Chesnut, Phile Plane Irons, Manufacturer Buck Bros., Milibury, Mass., D. R. Barton Tool Co., Rochester, N. Middletown Tool Co., 18 & 20 Cliff, N. Planes, Manufacturers of
. 5	Lewis, Oliver & Phatips, Pittsburgh. Pa	Plane Irons, Manufacturer of Buck Bros., Milibury, Mass
. 9	Hicks O. H. & Co., Baltimore, Md	Middletown Tool Co., 18 & 20 Cliff. N
h. 7	Hoisting Engines. Makers of. Crane Bros. Mfg. Co. Chicago, 111. Otts Bros. & Co. 348 Broadway, N. Y.	Planes. Manufacturers of Bailey Wringing Machine Co., 166 Ch D. R. Barton Tool Co., Rochester, N Greenfield Tool Co., Greenfield Mass
. 7	Horse Nails, Makers of. Ausable Horse Nail Co. 35 Chambers, N. Y	
27	Globe Nail Co., Boston, Mass. Platt & Co., Buffalo, N. Y Putnam S. S. & Co., N-conset, Mass. The Fowler Nail Co., Seymour, Conn.	Plated Ware Derby Silver Co., Derby, Ct., Hall, Elton & Co., 75 Chambers, N. 1
. 21	The Fowler Nail Co., Seymour, Conn	8 Plows. Metkle Thos. & Co., Louisville, Ky.
30	The Fowler Nail Co., Seymour, Conn. Horse Shoes, Makers of, Boston Rolling Mills, 17 Batterymarch, Boston. Burden Iron Works, Troy, N. Y. Rhode Island Horse Shoe Co., Providence, K. I., 3 Schoenberger & Co., Pittsburgh, Pa	Meikle Thos. & Co., Louisville, Ky., Meikle Thos. & Co., Louisville, Ky., Plows, Chilled Iron. Makers of. South Bend Iron Works, South Bend Plumbers' Materials, Manufactu Baltimore Bell and Brass Worss, S day Baltimore Md
5	Schoenberger & Co., Pittsburgh, Pa.	6 Baltimore Bell and Brass Works, 5 day. Baltimore, Md. Everhart Jas. M., Scranton, Pa Carr Wm. S. & Co. 106 Centre, N. Y.
. 17	Hydraulic Jacks. Oudgeon Richard. 24 Columbia. N. Y. Lyon E., 47 Grand, N. Y.	Carr Wm. S. & Co. 106 Centre, N. Y.
22	Holden E. J. & Co., 54 Beekman, N. Y.	Preservation of the state of th
13	Insurance, Seiler. Hartford Steam Boller Inspection and Insurance Co Iron Brokers.	Merriman A. H., West Meriden, Ct., The Stiles & Parker Press Co., Middle
20	Hen Brokers. Boynton Geo. A. 70 Wall, N. Y. Crane U. O., 101 John, N. Y. Hatry A. G., Pitisburgh, Pa. Hazard T. D. 204 Pearl, N. Y. Smith W. Minor. 95 Beaver, N. Y.	4 Keystone Portable Forge Co. Philad
5	Hazard T. D. 204 Pearl, N. Y Smith W. Minor. 95 Beaver, N. Y	Printing Presses. Kelsey & Co., Meriden, Conn
34	Iron Bilages.	Peck Wm. Porter, 518 Walnut, Phila Pulleys, Friction.
31	Spencer's Sons, I. S., Guilford, Conn	Penneld Block Works, Lockport. N. Yocom & Son, Drinker, below 147 N.
21	Leighton Bridge and Iron works, Rochester, N. Y., I from (Castings.) Spencer's Sons, I. S., Guilford, Conn. Iron, Charconl, Warm or Cold Blast, Quincy John W., 38 William, N. Y. Iron Commission Merchants, Brown T. Horace, 265, Walnut, Phila. Brown T. Horace, 265, Walnut, Phila. Brand Jas. C. & Co., 618 and 618 warket, Phila.	Franing Shears, 18 Walaut, Phila Peck Wm. Porter, 818 Walaut, Phila Peck Wm. Porter, 18 Walaut, Phila Peck Wm. Porter, 18 Pamping Engines, (Hot Arr) Mak Rider, Wooster & Co., Walden, Ora Pumps, Makers of. Ciavton Jas., 11 Water, Brooklyn, N
29	A Calling St Londo Mo	Clayton Jas., 11 Water, Brooklyn, N Douglas W.& B., Middletown Conn Rider, Wooster & Co., Walden, Oral Rumsey & Co., Seneca Fails, N. Y., Union Mfg. Co., 38 Chambers, N. Y.
. 11	Lowe S. B. Chattanooga, Tenn	Rumsey & Co., Senecs Fails. N. Y., Union Mfg. Co., 38 Chambers. N. Y.
11	Williamson James & Co., e9 Wall, N. Y	Brown Edward, 311 Walnut, Phila
11	Bonnell, Botsford & Co., Youngstown, O Borden & Lovell, 70 and 71 West, N. Y.	Hailrond and Mining Tools. Metcalf, Paul & Co., Pittaburgh, Pa.
36		Haitrend Supplies. Jackson & Tyler Baitlmore, Md Rogers H. A 19 John, N. Y
11	Huerstel G., 99 Market Slip, N. Y. Faller, Lord & Co., 139 Greenwich, N. Y.	4 Rails, Iron or Steel, Makers of.
11 11	Harrison & Gilloon, 558 to 562 Water, N. Y. Jackson & Chase, 206 and 208 Franklin, N. Y. 455 and 455 Water, N. Y. 455 water, N.	2 Jackson & Tyler Baitimore, Md. Rogers H. A. 19 John, N. Y. Semple W. & A. C., 44 Third, Louisy Bails, Iron or Steel, Makers of, Atkins Bros., Pottsville, Pa. Cambris Iron Co., Johnstown, Pa. Cleveland Rolling Mill Co., Clevelan Grawold John A. & Co., Proy, N. Y. The war and John Co., Solid Co., See The See Thomson Seed Co., See The See Thomson Seed Co., See The See Traps, Makers of, B. F. Badger & Son Charlestown, 1 Rivets.
	Ogden Waltace, 55, 87,59 and 91 Elm, N. Y. Pierson & Co., 24 Broadway, N. V.	Griswold John A. & Co., Troy, N. Y Lackswarns Iron and Coal Co., Sci
86	Quincy John W., 26 Wulfam, N. Y. Reed John H. & Co	4 Razer Straps, Makers of. 6 B. F. Badger & Son Charlestown
35	Richards D. W. C. Co., 32 Mangin St. N. V. Snyder Ass. Richmond. Vs. Wallace Wm. H. & Co. Albany and Western	Hivets. Alen Chas. B., 17 Hamitton, Phila. Hoopes & Townsend, Phitadelphia. Timune's Son Peter, 241 North 6th, Bit
84	streets, N. Y	Hoopes & Townsend, Philadelphia. Timine's Son Peter, 241 North 6th, Bi Thorn Geo., 151 Centre, N. Y
34	Williamson James & Co., 69 Wall, N. Y. Whitney A. R. & Bro. 58 Hudson N. Y.	4 Rond Scrapers, &c. Semple, Birge & Co., St. Louis, Mo.
	Barker W. C. & Co., Chicago	Hond Scrapers, &c. Roul Scrapers, &c. Semple, Birge & Co., St. Louis, Mo. Rolling Mill Machinery, etc., Moore Jones. Cor lith and Buttom Roofing Faint. Prince's Metallic Paint Co., 225 Pea Rules. Manufacturers of 3. Char
15	Bradley, Reis & Co., 22 Cliff, N. Y. Burden fron Works, Troy, N. Y.	4 Prince's Metallic Paint Co., 225 Pea
. 13	Cleveland Rolling Mill Co., Cleveland, O., Berrson, Macrum & Co., Pittsburgg, Pa.	Staniev dule and Level Co., 35 Chan Sand and Emery Paper, Maker
28	Leonard John, 450 & 451 West at, N. Y. Ota Dominion Iron & Naft Works Co., Richmond V.	Beader Adamson & Co., 730 Market Baws, Makers of. American Saw Co., Transfer, M.
9 34 8 31	Oxford Iron Co., 81 Washington, N. Y. Phillips, Nimick & Co., Pittaburgh, Pa.	Stanev dule and Level Co 35 Chan Sands and Emery Fenger, Maker Beader Adamson & Co 730 Market Saws, Maker of, American Saw Co., Trenton, N. J. Akins E. C. & Co., Indianapolis, in Boyoton E. M., 80 Beekman, S. Y., Penger of Herra, Williamburg, N. Y. Wheeler, Madden & Clemson Mig. 6
	Phonix Iron Ce., 410 Wainut, Phila. Rowland Win. & Harrey, Phila.	Disston Henry & Sons, Phila
29	The Passale Rolling Mill Co., Paterson, N. J	N. Y. Saw Frames, Wood, Makers of
6	The state of the s	wheeler, manuen & Clemaon Mig. Sa w Frames, W ond, Makers of, Peace Harver w, Williamsourg, N. Chatfilion, John & Sons, 91 Cliff, N. Renie isros, 9th above Manter, Phil Milve Governor (A., Bashlehem, Fr. Borews, Makers
	Iron, Swedish, Importers of.	Rienie Bros., 9th above Muster, Phil
ik.,	Mitander Nils, 69 William. N. Y. Irons (Tuyere.) Stevens & McLean, 298 Monroe, N. Y.	9 Whive Governor Co. Respinhers De-

ngravers. Collins, Geo. B. 10 Warren, N. 7	Lond Pipe. &c., Manufacturers of. Bayley, Farrell & Co., Pittsburgh, Pa	Di
Swinton 2 4 166 Chestude Lun	Levels. Disaton Henry & Sons, Phila	Tr
nucets. Brass, Makers of. McNab & Harlin Mfg. Co., 56 John, N. Y	Bohannan Wilson, Broadway and Kossuth, Brooklyn,	Ve
Many terrorises as	E., D Romer & Co., Newark, N	Di Pi
Carr J. & Riley 82 John, N. Y	Machinese Makes or	She
Frasse Peter A. & Co. 35 Fulton, N. Y. 8 Moss F. W., 80 John, N. Y. 28 Sanderson Bros. & Co. 16 Cliff. N. Y. 28 Spear & Jackson, 89 Chambers, N. Y. 29	Barker & Starrett, 1261 Ridge Ave., Philadelphia34 Bliss & Williams, 167 Plymouth, Brooklyp	She
Spear & Jackson, 89 Chambers, N. Y	Forsaith S. C. & Co., Manchester, N. H	H
Adamantine Flie Works, Providence, R. I	Forsatta S. C. & Co., Manchester, N. H. 38 Leng & Ogden, 272 Post I, N. Y. 8 Pratt & Whitney Co., Hartford, Conn. 34 Sellers Win, & Co., 1600 Hamilton Phila. 35 Teat, C. A. & W. L., 4116 Ludlow, Phila. Pr. 34 The Hull & Belden Co., Danbury, Conn. 32 Wetnerull Kobert & Co., Chester, Pa. 34	Ol She
Barnett G & H. Ai and 43 Henmond. Phila. 8 Disston Henry & Sons, Phila. 25 Draper C. F. & Co., Sing Sing, N. Y. 8	The Hull & Belden Co., Danbury, Conn	Sie
Draper C. f. & Co., Sing Sing, N. Y	Machine Screws, Makers of. Boone W. C., 28 Humbo'dt, Brooklyn, E. D	Ski
Johnson & Bro., 1 Commercial, Newark, N. J 8	Lyon & Fellows Mfg. Co., Williamsburg, N. Y	Pa
McCaffrey & Bro., 1732 and 1734 N. 4th. Phila 8 Nichoison File Co., Providence, R. 1. 24 Paul Chas, B., Williamsburgh, N. Y. 8 Rothery John & Wm., Matteavan, N. Y. 8	Machiniata.	Sle
Pamm Advallato Machiner	Hardman James Jr., 71 John, N. Y	Sm
Brokiyn Clay Retort and Fire Brick Works, Van	Maileable Articles. Maker of. Hammer & Co., Branford, Ct	Bi Di H
Hall A. & Sons, Perth Ambov, N. J	Match Safe. Evans Price, 638 Green wich, N. Y	Re Sine
Kreischer B.& son, 58 Goerck, N. Y	Measuring Tapes. Eddy Geom.& Co., 353 Classon Ave., Brooklyn, N. Y 6 Mechanics Tools.	H Spe
Newton & Co., Albany, N. Y 24	The Douglass Mfg. Co., 62 Reade, N. Y	Spi
Weber Adam, 1633 E. 15th, N. Y	N. Y. Haudie & Mallet Works, 456 E. Houston31 Manganese.	Squ
Hat and Emery Paper and Cloth.	Pyrolusite Manganese Co., 214 Pearl, N. Y	Su
Fluting Machines. Sauerbier's Sons, H., Newark, N. J	Condington F. B. & Co., 25 and 27 CHff. N. Y. 2 Urane U. O., 104 John. N. Y. 3 Ploureson, Van Dusen & Co., 29 & St CHff, N. Y. 2 Graves O. W. 42 CHff. N. Y. 2 Gregg H. L. Co., 108 Walnut, Philis. 5	See
	Graves O. W., 42 Cliff, N. Y. Gregg H. L. Co., US Walnut, Phila	Ste
Saml. J. Cresswell Jr., 812 Race, Phila., Pa	Gregg H. L. Co., 108 Walnut, Phila 5 W. J. Haymmona, Pittaburgh, P 9 Phens, Dodge & Co., Cliff, bet. John & Fulton, N. Y. 2 Purves A. & Son, cor. South and Penn, Phila 15 Quincy J. W., 18 William, N. I 17 Sturges Frank & Co., 72, 74 & 76 Lake Chicago 3 The New Haven Copper Co., 255 Pearl, N. Y 2 Metalluration	B
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Furnaces Makers of Richmond & Potts, 1:9 S. Fourth, Phila., 1:a 5 Astwantzed Iron. Lefterts Marshall Jr., 90 Beekman, N. Y	Omiton : Diodmets 1900 Waters Obile	ME
Lefterts Marshall Jr., 90 Beekman, N. Y	Metal's, Anti-Frection Baidwin B. W., Pittsburgh, Pa	J
Glass Signs. Otto Steitz, N. Y. G'ass Letter Co., 188 Grand, N. Y. 8	Haves G. 71 8th ave	B
Bebr Herman & Co., 261 Pearl, N. Y		F
Junius Judson & Son. Rochester, N. T	Hickeox Mtg. Co., 280 Pearl N. Y. deat Chepping Machinery. Balley Wringing Machine Co., (66 Chembers, N. Y. Murray Iron Works, Burlington, Iowa. Miners' Candles. Makersof James Boyd's Sons. 10 and 12 Frinklin, N. Y	8
Vanderbit Geo., foot W. 19, N. Y		J
	House Trans. Catchemalive. Makers of	1
Parker Gilbert, 225 Market, N. J	Nalls Schoenberger & Co., Pittsburgh, Pa	200
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	Hartman John, 3716 N. Seventh, Philadelphia	1
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N. Carolina Handle Co., 79 Reade, N. Y	Owen S. S. & Co., 121 E. IS, N. Y. 23 Roehrig, Fred Wm., 217 Center, N. Y. 23	47.45
Semple, Dirge & Co. St. Louis, Mo. 31 Pardware Commission Herchauts. Granam & Hainea. 113 Chamoers. N. Y. 36 Walbridge G. R. & Co., 83 Reade, N. Y. 22 Walsh, Coulter & Flagler, 85 Chambers, P. Y. 37	Wenz, I A. C., 114 Center, N. Y. Wicks & Co., 79 First st., Brooklyo, E. D. N. Y. 23 Wilder & Co., 114 Fulton N. Y.	1
Barker W. C. & Co., Chicago	Norway Shapes, Radlers of, Rowland Wm. & Harvey, Frankford, Phils	31
Brower John I. & Son. 288 Greenwich, N. Y	Gallauget r. W 3 and 5 Wall. N. Y.	13
Quackenbush, Townsend & Co., 59 Reade, N Y	Cark Bros. & Co., Middale, Conn 12 Fuiler, Lord & Co., 18s Greenwich, N. Y. 4 Haskell W. H. & Co., Pawtucket, R. ! 13	Si
Shepard Sidney & Co., Buffalo N, Y. 2 Hardware Importers. Boker Hermann & Co., 101 Duane, N, Y. 2 King, Briggs & Co., 30 Chambers, N, Y. Van wart & McCoy, 134 and 136 Duane, N, Y. Windmulier Louis & Roelker 20 Reade N, Y. Lardware Manufacturer.	Fuller, Lord & Co., Market, Colin Puller, Lord & Co., 18a Greenwich, N. V. 4 Jewis, Oliver & Phillips, Pittisburgh, Pa. 13 Lewis, Oliver & Phillips, Pittisburgh, Pa. 4 Russell, Breise & Ward, Port Chester, N. Y. 56 Shelton	8
Windmuller Louis & Roelker 20 Reade N. Y		
Hardware Manufacturers, American Spiral Spring Butt Co 82 Beekman, N. Y Blake Bros. Hardware Co New Haven, Conn	C. Reissner & Co. 242 Pearl N. V.	S
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Hart, Bliven & Mead Mfg. Co., 243 Pearl N. Y	Old Iron, etc. Gregg H L. & Co., 108 Walnut, Philadelphia	T
Parr Geo., Buffalo, N. Y Pecy G. Webster, 110 Chambers, N. Y.	Ore Crushers. Blake Crusher Co New Haven Ct	T
Corbin P. & F., & Chambers, N. Enterprise Mfg, Co., Fhila	Balac Crusher Co., New Haven Ct. 34 Paints and files, Dealers in. Devoe F. W.& Co., 117 Fulton, N. Y. Pans. (Pripping and Bread.) Levis, Daizel & Co., Pitteburgh, Pa. 3	T
Union Mfg. Co. 99 Chambers, N. Y. Van Wagoner & Williams 82 Beekman, N. V.	Patent Solicitors. A. V. Briesen, 258 Broadway, N. Y	
Wilson Mfg. Co., 97 Chambers, N. Y	Spencer A. H., 28 State Boston, Mass	T
Hardware Speciallies. Grant & Co., Newark, N. J. Hardy & Co., 102 Elm. N. Y. Jessup & Sterline, 7 and 9 Ulff, N. Y. Milwankee Mrg. Co., Milwankee, Wis. Perin & Graff & Co. Chreinant, O	Eaton. Cole & Burnham Co., 58 John. N. Y	T
Milwaukee Mrk. Co., Milwaukee, Wis. Perin & Gaff Mfg. Co., Cincinnati, O. Semple, Birge & Co., St. Louis, Mo.	Pipe. Water and Gas, Makers of. Leighton Bridge and Iron Works, Rochester, N. Y. 16	T
Semple, Birge & Co., St. Louis, Mo	howoon & Son, Phila. and Washington, D. C. Spencer A. H. 28 State Boston, Mass. Pipes, Fittings, etc., Makers of, Eaton. Cole & Burnham Co., 58 John, N. Y. McNab & Harlin Mig. Co., 58 John, N. Y. Pine. Water and Gas, Makers of, Leighton Bridge and Irou Works, Rochester, N. Y. McNeal John & Sons, Burlington, N. J. Warren Foundry & Macn. Co., Philipsburg, N. J. Wood R. D. & Co., 400 Chesnut, Phila. Planet Froms, Manufacturer of Buck Bros, Milibury, Mass. D. R. Barton Tool Co., Rochester, N. Y. Middletown Tool Co., Rochester, N. Y. Middletown Tool Co., 18 & 20 Cliff, N. Y. Planes, Manufacturers of Middletown Tool Co., 18 & 20 Cliff, N. Y.	
Lewis, Oliver & Pharips, Pittsburgh. Pa	Plane Irons, Manufacturer of Buck Bros., Milibury, Mass. D. R. Barton Tool Co., Rochester N. V.	T
Hicks O. H. & Co., Baltimore, Md. Hosating Englues, Makers or, Crane Bros. Mfg. Co., Chicago, III. Otts Bros. & Co. 38 Broadway, N. Y. Horse Nails, Makers of, Ausable Horse Nail Co., 35 Chambers, N. Y. Northwestern Horse Nail Co., Chicago, III. Globe Nail Co., Boston, Masse.	Middletown Tool Co., 18 & 20 Cliff, N. Y	8
Otts Bros. & Co. 348 Brosdway, N. Y. Horse Natls, Makers of. Ausable Horse Nall Co. 35 Chambers, N. Y.	Planes. Mankfacturers of Bailey Wringing Machine Co., 166 Chambers, N. Y	3 V
Northwestern Horse Nall Lo., Chicago, III. Globe Nall Co., Boston, Mass. Platt & Co., Buffalo, N. Y. Putnam S. S. & Co., Neponset, Mass. The Kowley Nail Co. Seymour Co.	Planter Rule & Leve Co., 35 Chambers, N. Y	6
Putnam S. S. & Co., Neponset, Mass The Fowler Nail Co., Seymour, Conn		1
Boston Rolling Mills, 17 Batterymarch, Boston Burden Iron Works, Troy, N. Y.	Plows, Chilled Iron. Makers of. South Bend Iron Works, South Bend Ind	3 1
The Fowler Nail Co., Seymour, Conn. Horse Shoes, Makers of, Boston Rolling Mills, 17 Batterymarch, Boston. Burden Iron Works, Troy, N. Y. Rhode Island Horse Shoe Co., Providence, k. I., Schoenberger & Co., Pittsburgh, Pa.	Metkle Thoa. & Co., Loulaville, Ky. 2 Plows, Chilled Iron. Makers of. 3 South Bend Iron Works, South Bend Ind. 3 Plumbers' Matterials, Manufacturers of 6 Baltimore Bell and Brass Works, \$8 and 55 Holtiday. 3 Everhart Jas. M., Scranton, Pa. 3 Carr Win. S. & Co., 166 Centre, N. Y. 2 Power Hammers, Makers of. 3 Fresses, Power, Makers, M. 1 Prisses, Power, Makers, M. 1 Printing, Presses, P. 1 Printing, P. 1 Printing, Presses, P. 1 Printing, P. 1 Printing, Presses, P. 1 Printing, P. 1 Printing, Presses, P. 1 Printing, P. 1 Printing, Presses, P. 1 Printing, Presses, P. 1 Printing, Presses, P.	2 1
Dudgeon Richard. 24 Columbia. N. Y	Carr Wm. S. & Co. 406 Centre. N. Y	2 1
Holden E. J. & Co., 54 Beekman, N. Y	Forsaith S. C. & Co., Manchester, N. H	5
	Merriman A. H., West Meriden, Ct	5
Iron Brokers Boynton Geo. A. 70 Wall, N. Y Crane U. O., 104 John, N. Y Hatry A. G., Pittsburgh, Pa. Hazard T. D. 204 Pearl, N. Y Smith W. Minor, 95 Beaver, N. Y	Keystone Portable Forge Co., Philadelphia3 Printing Presses.	5
Iron Bilages.	4 Pruning Shears. Peck Wm. Porter, 518 Walnut, Phila	2
Leighton Bridge and Iron Works. Rochester, N. Y., Iron (Castings) Spencer's Sons, I. S., Guilford, Conn	Praining Shears: Peck Wm. Porter, 518 Walnut, Philis. Peck Wm. Porter, 518 Walnut, Philis. Petheys, Frictions. Penneld Block Works. Lockport. N. Y. Yocom & Son, Dringer, below 147 N. 24, Philis. Pumping Engines. (Hot Air) Makers of Rider, Wooster & Co., Walden, Orange Co., N. Y Pumps. Makers of.	8
Leighton Bridge and 1ron Works, Rochester, N. Y., 1970 (Charlings.) Spencer's Sons, I. S., Guilford, Conn. Iron, Charcoal, Warm or Cold Blass, Quincy John W. 38 William, N. Y., Iron Commission Werchants., Brown T. Horace, 265, Walnut, Phila. Hand Jas. C. & Co., 61s and 61s Market, Phila. Spooner & Collins, St. Louis, Mo.	Pamping Engines, (Hot Air) Makers of Rider, Wooster & Co., Walden, Orange Co., N Y.	2
Brown T. Horace, 26% Walnut, Phila	Pumps, Makers of. Clayton Jas. 11 Water, Brooklyn, N. Y. Clayton Jas. 11 Water, Brooklyn, N. Y. Dougtas W. & B., Middletown Conn. Rider, Wooster & Co., Walden, Orange Co., N. Y. Luion Miz. Co., Senecs Fails, N. Y. Luion Miz. Co., Se Chambera, N. Y.	7
Thattanoore Tenn	Rumsey & Co., Seneca Fans. N. I	22.0
Williamson James & Co., 69 Wall, N. Y. Iron Dealers. Abeel Brothers, 190 South, N. Y.	Pyrometers. Brown Edward, 311 Wainut, Phila.	5
Bonnell, Botsford & Co., Youngstown, O Borden & Lovell, 70 and 71 West, N. Y.	Brown Edward, 31 Walnut, Phila. Halirand and Milning Teols. Metcaif, Paul & Co., Pittaburgh, Pa	13
Cleveland, Brown & Co., Cleveland, O. Coopey Paniel F, 83 Washington, N. Y	Jackson & Tyler Baitimore, Md	6 1
Huerstel G., 99 Market Silp, N. Y. Fuller, Lord & Co., 139 Greenwich, N. Y.	Rails, Iron or Steel, Makers of. Atkins Bros., Pottsville, Pa.	6
Jackson & Chase, 206 and 208 Franklin, N. Y	Cleveland Rolling Mill Co., Cleveland, O	6
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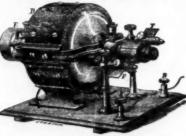
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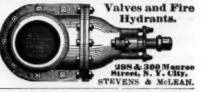
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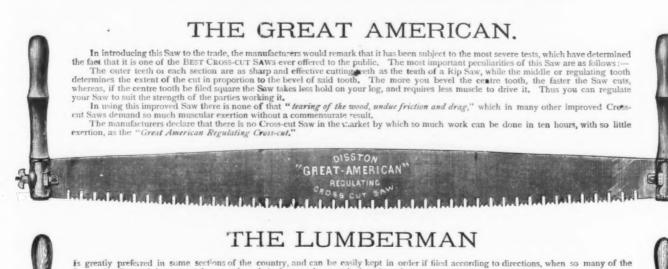
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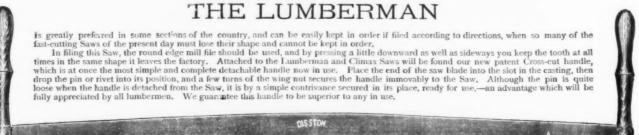
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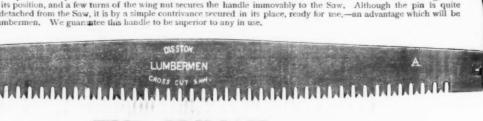
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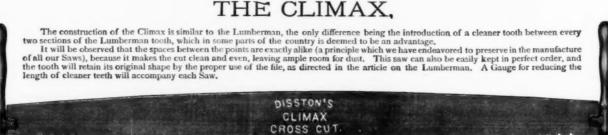
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OF EVERY DESCRIPTION.

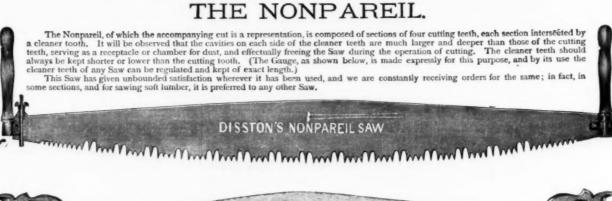


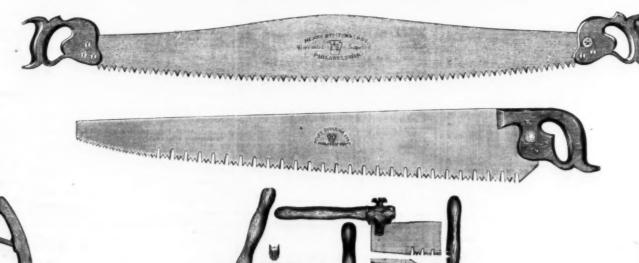


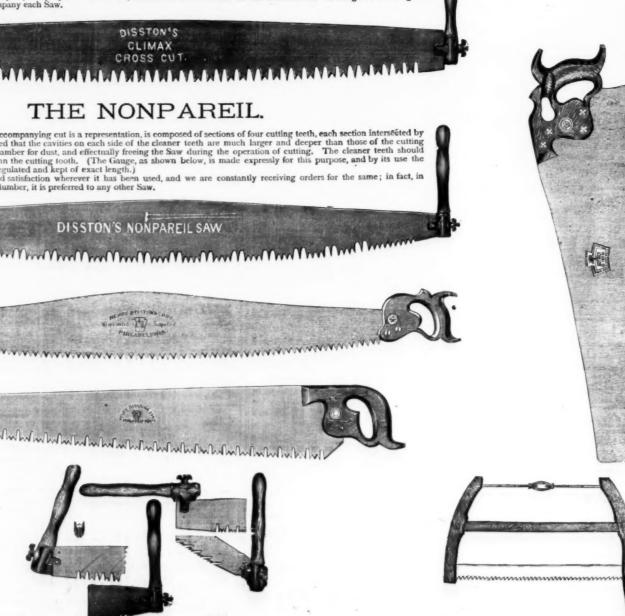














New York Wholesale Prices, November 28, 1876.

110	W TOTAL WITOTO	oute i ricos, iic	Vollibol Loj lo	701
HARDWARE.	DRILLED AND WIRED. Fast Jojot, Narrow	Rgg Beaters, 8 in. 10 in. dis 10 in.	Rolled Plate	Picture Nulls and R Brass Head. Porceiain Head. Richards' Patent.
Anviis. 9 b 15c dis 20 g	DRILLED AND WIRED	Dover # doz #5*00—dis 20 9 National # doz #4*50—dis 20 9 Emery.	Rolled Plate	Richards' Patent
A nviis.	Loose Pin, no Acorn	Genuine Chester—Hegular Nos	Heavy Welded Hook 14 in & up, 9%c 40 \$	First Quality
Ash Sifter A. J. E. Corning's Barrel Head	Union Mfg. Co.'s Fancy Butts.— Figured Enameled Loose Joint	Wellington Mills, Grain		Bailey's "Victor" Defiance Adjustable, new D. R. Barton Tool Co
Augers and Bits. Conn. Valley Mfg. Co	Boston Finish, Plain	National	Socket	Ohio Tool Co
Ivesdts 40&10 g Beecher (French, Swift&Co)} ist qualitydts 40&10 g Griswold	Fast Joint, Narrow	Recutcheons. Door Lock. Same discounts as Door Locks Brass Thread. dis 60&10 %	Scovil Pattern	" Balley's Pater " Auburn Tool (" Greenfield To
Rarson's Patent die 50&5 5	Loose Joint, Broad. dis 40e/10 4 Table Butts, Back Flaps, &c. dis 35e/10 4 Inside Butts, Regular. dis 35e/10 4 Light dis 40e/10 5	Wood die 25 % Faucets. Fenn's die 50 %	Winsted Planters' Pattern	Plane Irons, Deflance D. R. Barton Middletown T Ohio Tool Co.
Such Mig. Co. Such Mig. Co. Jennings Bits dis 10 x Ives Jennings Bits dis 55 to 5 vis Single (wist Bits dis 25 to 30 x Single (wist Bits dis 25	Jabie Butrs, Hack Flape,&c.	Fascets dis 50 s	Cotton	Spear & Jacks Sandusky Too Plow Bits, Greenfield Tool
Andrews' Sita description dis 50 % dis 50 % dis 50 % dis 50 % Expansive Bits, Clark' smail, \$18 ; large, \$25 — als 15 % Ives \$20 @ \$30 — dis 30 %	Blind Butts, Parker dis 65&10 @ 70&10 \$ Paimer dis 40 \$ Seymour dis 65&10 \$	Wood, Cotk Lined	" McGill's	Button's Patent. Hull's Patent Nippers. No. Lonch's Patent Wire Cutte
** ** ** ** ** ** ** ** ** ** ** ** **	Blind Butis, Parker dis 65&10 & 70&10 \(\) Paimer dis 40 \(\) Seymour dis 65&10 \(\) Seymour dis 65&10 \(\) Shepard dis 65&10 \(\) Shepard dis 65&10 \(\) Shepard dis 65&10 \(\) Luli & Porter dis 65 \(\) Nichoison dis 45&10 \(\) University dis 75&10 \(\)	American File Co \$5 00 to £ currency—dis 25 % Areade File Works \$5 00 to £ currency Auburn File Works \$5 00 to £ currency	** Sargent's list dis 33565 ≥ 10 \$ ** Reading list. dis 33565 ≥ 10 \$ Ceiling. (Hart's list. dis 606:106:10 \$ Largent's list. dis 606:56:10 \$	Gas Pilers and Nippers Plumbs and Levels.
1768 1768	" Clark's Nos. 1, 3 and 5	C. B. Paul's	Coat and Hat, Hart's list	Chapin's Standard Rule Co.'s New A
Beecher French, Switte Co. 1st quanty dis size 10 g Griswoold. Nobies Mfg. Co. dis 50&5 5 dis 40&10 \$ Patent dis 50&5 5 dis 40&10 \$ Patent dis 50&5 5 dis 40&10 \$ Patent dis 50&5 5 dis 25&10 \$ Patent dis 10 \$ Patent dis 25 \$ Pate	Sargent's	Feiles Plates Fe 15c; dis 25&10 5	Screw Hook and Eye	Futera Filers and Nippers Plumba and Levels. Stanier R. & L. Co. 8 Pat. Non- Chapir's. Standard Rule Co. 8 Non- A Johnson's Patent Adjustal David Freent. Pocket Levels
Double Cut Gimlet Bits, Shenardson's dis 30 s. Cut Gimlet Bits, Shenardson's dis 30 s. Ct. Valley Mfg. Co. dis 30 s. Hartwelly Mfg. Co. dis 30 s. dis 50 s.	Can Openers. Messenger's Comet. Messenger's Comet. Messenger's Comet. Der doz \$5.09 dis 30 \$ Lyman's Der doz \$7.5 dis 90 \$ Lyman's Der doz \$7.5 dis 90 \$ Messenger's Comet. Der doz \$7.5 di	Stubs'	Whiffietree—Patent. dis 60% 10% 10% 10% 10% 10% 10% 10% 10% 10% 1	Pulleys. Judd's Axic iiot House and Tackle
" Douglass". dis 25c 10 % " Ivre" dis 20; Morse's Bit Stock Drill , List of Jan'y 1, "76. dis 25 %	Sprague s Nos. 1 2 3 4	Spear & Jackson 8	Horse Nails. Nos. 5 7 8 9 10	Jap'd Screw. Brass Screw. Jap'd Side. Clothes Line.
Hommedieu's Sanp Augers dis 20 x Watrous Ship Augers dis 20 x Vaughan's Post Hole - 6 in , \$25 60; 7, 8 anc 9 in. \$25 per doz dis 20 x	Eureka	Thos. Turber & Co. (Peter A. Frasse & Co.) 4 50 t. £ gold Horse Rasps	Buffalo Forged " 31c 28c 26c 25c 24c 28c Globe, P't'd & Pol'd ' 31c 28c 26c 25c 24c 28c	Hav Fork Pamps Douglas Cistern, etc S. & F Union Mfg. Co's. Cistern a
Leed's. \$4 weach—dis 10 \$ Awis, Brad Sets, &c. Awis, Sewing, Common per gross \$1.55—dis 25ts Best per gross \$1.60—act	Caps Percussion Per 1000	Limet& Co. (French)	National Chited and See	Union Mfg. Co's. Cistern a Rams Garden £
"Shouldered Peg	U iton	Pony. 41n., \$4'15; 5 lb. \$5; 6 lb. 5'50; 7 lb. \$6 dis 25 \$ Mrs. Knox, No 1876	Perkins' Pointed and Polished	Punches. Beit or Oriveper
** No. 42, \$10.50; No. 43, \$12.50	Cares, -Horse and Curry Cares, -Horse and	Peerless, 4-inch Rolls. 4 00 each net	Mided	Spring. "Leach's Patest Bemis' Raii, Sliding Door, Wrought Bri
Blood's per doz \$10 00 @ 11 00 net D. R. Harton Tool Co P doz \$12 00 net	Wool dis 15&10 g. Curped Miretchers. per dor \$5:00 dis 30 g. Cast Steel, Folished per dor \$5:00 dis 30 g. Cast Iron, Steel Foints per dor \$2:00 dis 45&5 g. Sasters dis 45 g. 80 g.	6 " 3 is each net 8 " 4 90 each net Champion, 6 inch rolls 6 00 each net	r'utnam	Rail. Sliding Door, Wrought Bri "Iron, Paintee Barn Door, ½, ½ and ½ find "for N. E. Hang Rakes, Cast Steel.
Collins'. —	Cast ron, Steel Points. per doz 22 00 dis 40 26 5 4 5 4 25 02 Plate and Shallow Socket. dis 45 4 5 5 0 20 Socket. dis 40 5 4 3 1 2 5 0 20 Socket. dis 40 5 4 3 1 2 5 0 20 Socket. dis 40 5 4 3 1 2 5 0	Mach rolls	Horse Shoes. Burden. ** keg. \$4.63% R. I. Horse Shoe Co., Perkins' improved Light,	Case Steel
Manu s. \$\pi\$ dox 9 00 \(\tilde{a}\) 1 90 " bounde tetted. \$\pi\$ dox 22 00 \(\tilde{a}\) 23 00 \$\tilde{a}\) 25 00 \$\tilde{a}\] 1 30 Uncertaill's. \$\pi\$ dox 12 00 \(\tilde{a}\) 13 50 Uncertaill's. \$\pi\$ dox 12 00 \$\tilde{a}\] 13 50	Humason, Beckley & Co.'s	Defiance	Med. and Heavy W Keg. 47824 Mule Shoes W Keg. 57824 Perkins' Snow W Keg. 57824 The Boston Horse Shoe per keg \$5704	Malleable 550 Razer Straps. Evan's Imitation Emerson.
** Statley** Excelsion** \$15 50—dis 302.00 \$ **Axes.** Dought	English Coll	Limeté C. O. (French. 3 0 0 0 2 2 0 0 1	Boston Rolling Mills Hand Made	Evan's. Imitation Emerson Hunt's. Chapman
Axies. Common (Gay C. Hotchkiss, Field & Co.) # 5 4%c Boild Collar. Case Hardened, Childed Box # 5 8c	Trace. 7 U-2. by the cask, w pair gold. 55 to 57c German Halter Chain dis 2) \$ gold German Coll. dis 25 \$ gold German Coll. dis 25 \$ gold	Forges. Empire" (W. P. Kellogg & Co.) dis 30 % Keystone Portable Forge Co. dis 20 %	Novelty Ice Breakers	Torrey's. Saunder's. Mivers. Iron and Tinned
Axle Grease.—Frazer's % 5 6c. Balances. Light or "Common" dis 25 40 9 5410 9 dis 25 %	Sargent's the 60&10 %	Korks. Hay, Manure & Spading. Liced & Barton Fraits and Jelly Presses. Enterprise Mfg. Co. Str Plans (Co.)	Perkins', Vulcan and Globe 300 ibs dis 5 s Horse Shoes. 8 keg. \$44 824 k Burden. 8 keg. \$44 824 k B. I. Horse Shoe Co., Perkins' Improved Light. Med. and Heavy \$\$ keg. \$42 k Mule Shoes. \$\$ keg. \$42 k Perkins' Snow. \$\$ keg. \$56 k Perkins' Snow. \$\$ per dog \$65 k Perkins' Son Horse Son Berkins' Perkins' Pe	In bulk Copper Rivets and Burrs Nos. 7 8 9 16 Per lb. 49c 50c 52c 54
Elephant. per doz \$9 40 & 10 50 net Axies Grease. Fraser's by 16 & 10 50 net Baila nees. Light or "Common " da 55&10 \$ All other Bpring Isalances new list dis 50.85 \$ Banas. risted new list dis 25&5 \$ Both Frated list) new list dis 50.85 \$ Orolde Beat System of the first dis 50.85 \$ Beat System of the first dis 50.85 \$ Orolde Research of the first dis 50.85 \$ Beat System of the first dis 50.85 \$ Bea	White	Enterprise Mfg. Co	Kertles. Brass	Rivet Sets
Bed Keys. Gray's katchet	Chisets. D. R. Barton Tool Co. (all kinds)	Fry Paus. Burnished, f. S. & W., new list	### Anives. Ames' Butcher Knives. "Shoe dis 15 g "Bread Hay ang Straw, "Wadsworth's" Tuble sad Pocket. See Cutlery ###################################	Reds.
Hand, Light Brass	Douglass, Extra dis obside to 15	## Star	Hav and Straw, "Wadsworth's" die 30 % Tubie sad Pocket See Cutlery Knobs.	Reliers. Barn Door. Noveity. Bope. Manu
" Swiss	"Firmers, Douglass, Extradis tok:10 % "Crossmandis 60 % "Buck Brosnew itst dis 17 % @ 20 %	Natl and Spike	Base Common	" Tar'd Rope
# Barton's	Hart at g. Co., No. 1 dis 60&10 \$ Merril dis 60&10 \$ Witherby Tool Co. dis 60&10 \$ Socket Corner dis 60&10 \$	"Smith's Patent per dox \$18:00, dis 40 \$ Gimietes. Nail and Spike. dis 254:10 \$ "Bee" Gimiets. per gross, \$1:00, dis 45 \$ Double Cut, Shepardson's dis 20 \$ dis 40 \$ " Hartwell's. dis 40 \$ dis 40 \$ \$ " Los \$1.5" dis 20 \$ dis 40 \$ \$ " Los \$1.5" dis 20 \$ \$ dis 40 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Table sad Pocket. See Cutlery K Nobbs. Carriage (Jap'd 8) cents per gross) dis 60&10 5 8ase—Common dis 30&10 5 12 12 12 12 12 12 12 12 12 12 12 12 12	Hay Rope
Bee Keys Gray Hatch W doz 4 00 dis 15 Heiis Hatch Light Brass Gis 70&5&10 27 5 5	Firmers, Douglass, Extra. dis 60&10 x	Glue Post dis 25&10 g Tinned and Sameled dis 25 c Tinned and Sameled dis 25 c Fannil, How's "Eureka" dis 25 c Fannil, How's "Eureka" dis 25 c Griud Same Fixtures dis 25 c Sargeut's Patent dis 70&11 c Reading Hardware Co dis 70&10 c Bart Lasig Co's dis 60&26 dis 70&10 c Rick Bros dis 60&26 dis 70&10 c Rick Bros dis 45&5 c Hamsmors Sledge & Stone # \$ 40c; dis 40 c Humason & Beckley Mg. Co dis 25 g Maydole s dis 12 g Henry Hammonds' dis 12 g Cheney s dis 5 G 75 g Verree dis 5 G 75 g Verree dis 5 G 75 g	Furniture, Plain Sec gross lich, dis 10 5	Hay Rope. Rules. Chapin's.
Hart, Bliven & Mead Mfg. Co	Clamps. iron, Providence Tool Co.'s, Wrt. Iron	Reading Hardware Co. dis 70&10 \$ Reading Hardware Co. dis 60&26&10 \$ Rick Bros. dis 45&5 \$	" Sargent's	Stanley
Call	Troylade Ce Tool Co. Wrt. 1708 dis 25	Kmmet Hammer Co.'s Handled	Monroe's Fatent.	Sad Irons. From 4 to 10 lbs. Sad Iron. Nickei Stand atts Self-Heating Tatlors
Kentucky "Star" dis 20ac10 a Sargent's dis 60ac10 a Dodge's Genuine Kentucky, new list—	Carriage Makers', Sargent's	Henry Hammonds' dis 13½ % Cheney s dis 5 @ 7½ % Verree. dis 5 %	Astra.	Mrs. Potts
\$1200 1000 900 800 600 500 850 850 500—dis 40 s Yaw's Genuine	Cockeves1\(\) in., 28c.; 1\(\) in., 35c.; 1\(\) in., 37c. net Cockes. Brass Eacking	Cheney s	Tankee	Star.
" Extra and rittsburgh Patterndis 10 %	Cockeves. 1½ im., 28c.: 1½ im. 35c.; 1½ is. 57c. net Cockes. Brass Eacking. dils 45 g Lock and Globe. dils 45 g Lever Bibbs. dils 45 g Lever Bibbs. dils 45 g Lever Bibbs. dils 55 g Lever Bibbs. dils 25 g Selsor's Pat. \$9 50, \$10 50 dils 25 g American (Enterprise Mfg, Co.) dils 20 g French Steet dils 20 g	Providence Tool Co.'s Hand Cuffs \$15 per doz dis 10 f	Porcelain Lined	New England, same list as H. B. & M. Roman Flux
Moulders'	Increase Wilson's	Providence Tool Co.'s Hand Cuffs \$15 per dox { dis 10 s}	District	Patent
No common of the old o	Companies and Dividers	WIGHT CHEST	Wire Clothes, Gai'd	Raw Hide
Blind Staples. Boardman's Patent, % in. and larger	Excessior	Lifting	Trunk dis 25 4 Langstroth & Crane, Round Key dis 40 5 Flat Key dis 33 4 5 Harnes & Dette Flat Key dis 38 4 5	Norwich. Walker's. New England
rigels. dis 30 % native. Kope and from St. apped, Providence Toul Co.'s tist. dis 30 % native. Smile St. alies & dis 30 % no S	Chas. E. Little	Brad Awl	Yaie Lock Co., Fiat Key. dis 40 g Sargent & Greenleaf, Flat Key. dis 20 g Continental. dis 25 g	Walker's. New England. Hammond's Window Sprin Bash Weights.—Solid Bausage Stuffers or Miles. Stow or Perry # doz
Hiewers. Keystone Portable Forge Co	Bradlev s. dis 10 % Brow Bars. Cast Steel. \$ b 11c. net	" Framing " " " 500	Timec	Draw Cut No. 4
Hiewers Reystone Fortable Forge Co. dis 20 s	Bennis & Call Co.'s	Framing	Peaton P	Spear & Jackson's. Dismon scircular.
"Flush, Stanley's dis 15&10 c	Pinching irons w doz 7 50—dis 20 s Curry Combs. Curry Comb Mrg. Co. dis 25&10 s	Hansers. Swan's per set \$1 (0)—dis 20±10 \$ Bara Door dis 65±10 \$ "Anti-Friction" No. 1, \$1:25; No. 2, \$1:20 \$\pi\$ pr. dis 40 \$ Novelty. dis 40 \$	Mailory, Wassier & Co	Disson s Circular. Mill. Cross Cut. Hand, Panel, Rip. H. W. Peace's Circulars. Mill. Gross Cut. Cross Cut. Cross Cut.
**	Fitch's (List of No. 240, \$1)	Novelty dis 40 %	Padlocks, Russell & Erwin	k. M. Boynton's Lightning,
Stove—American Screw Co. s. dis 45 g R. B. & W dis 40 g dis 40 g dis 40 g dis 45 g	Cutiery. American Table Meriden New list July '76, dis 25 % American Pocket Cutiery Co	Sovety	Romer's	" Buck Saws Billet Web Pruning Wheeler & Clemson Mfg. C
Bort Ends. 24 6 13/6 2 5 Boring Machines. Upright Angular.	Am. Miller Bro.'s Cutlery Co	Andrews' dis 25 %	Barnes & Deitz	Livingston's Butcher and H Livingston's Framed Wood Nos. 10: 102 Per doz \$12:00 10:00 1
Hovey's, no Augers	Dippers	Shingling, Nos. 1 2 3		
Parr's, no Augers. 540 750 dis 30 5 " with Augers. 750 10 00 dis 30 5 Keilogg's, no Augers. 575 675 dis 15 4 Bwette 975 40 net	Embossed Gilt	Shingling, Nos. 123	# dos. \$14 00 \$17 00 \$19 00 \$30 00 dis 35 \$ Miles ChallengeNos 1 2 3 # doz. \$2200 \$5000 \$40 00—dis 30 \$ Perry's (P. S. & W. 1. Nos. 200 900 400	Common Lever
with Augers	Embosseq Gift	Hurd's	₩ ασπ. \$22.00 \$27.00 \$40.00—ais 25 π Woodruff's (P. S. & W.)Nos. 100 150 Ψ doz. \$15.00 \$16.00—dis 25 π Halos' Nos. 11 12 18	mitation Common Lever Leach's No. Nash's Hammer, Hotchkiss Alken's Genuine Alken's Genuine Tunitation
Bow Pins. Dalon Nut Co	Johnson's " # doz \$700 net Gem (Coil). No. 1, Large, Japanned per doz \$350 No. 2, Medium, " per doz 200 dis 10 \$ No. 3, Sansii, " per doz 200 dis 10 \$ No. 3, Sansii, " per doz 200 dis 10 \$ Japanned per doz \$70 \$20 \$500 Coppered per doz \$40 \$20 \$500 dis 10 \$	Latting	Miles Challeuge	Hatca, Counter
Braces. Barber's Patent	Japanned per doz \$200 2-50 3-50 Coppered per doz 4-50 4-50 5-00 dis 10 5 Galvanized per doz 3-50 4-00 4-50 5-00 dis 10 5 Nickeled per doz 3-50 4-00 4-50 3-50 dis 10 5	Simmon's	Each \$80/U \$75.00 \$80/U \$225.00 \$410/U—dls 30 £ Merricsu.	Brown's Fairbanks' Howe's Chatillon's Grocers'
Harber's Patent	Gaivanized per dog 5730 600 706 Nickeled per dog 5730 600 706 Premium (Coli) - Nos. 1 2 3 Janamued Per dog 5750 625 540 Nickeled Per dog 1100 950 900 Mickeled Per dog 1100 950 900 Miskeled Sin., \$500 8 in., \$700 dis 15 5 Barker's Conceated dis 15 5	Singular, 10 1 25 4 402 9 00 9 20 10 00 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Wellulaw	" Eureka
Common Bali (American) dis 30-810-8 Brackets,—Sheif dis 60-810-9 60-810-9 Bright Wire Goods dis 65-810-810-9	Braker's Conceated dis 15 s Brawing knives. Crossman's No. 1 dis 6045 s	D. R. Barton Tool Co	Bush	Box. 1 Handle
Hotchkiss'254 in., \$2.25 net	Hart Mfg. Co., No. 1 ats 60& 10& 10 \$	J. P. Verree & Co. dis 5 Shingling, Nos. 123. \$\psi\ \dot \sqrt{20} \text{7 50} 7 50 8 00 \$\text{Ciaw}, \text{123} \text{\$\psi\ \dot \sqrt{20} \text{7 50} 8 00 \$\text{8 50} \text{8 50} \	Mortising Machines	Foot
Hunason, Becklev & Co. dis 30&10&5 \$ Sutchers' Cleavers. Rumason & Beckley Mfg. Co. dis 30&10 g D. B. Barton Tool Co. dis 30 g Bradley'. dis 25 \$ Beatty's dis 25 \$ Beatty's dis 25 \$ Harr Mfg. Co. dis 30 #37 \$27 \$48 \$27 \$48 \$20 \$35 \$36 \$30 \$35 \$36 \$30 \$35 \$36 \$30 \$35 \$36 \$30 \$35 \$36 \$30 \$35 \$36 \$30 \$35 \$36 \$30 \$35 \$36 \$30 \$35 \$36 \$30 \$35 \$36 \$36 \$30 \$36 \$36 \$30 \$36 \$36 \$36 \$30 \$36 \$36 \$36 \$36 \$36 \$36 \$36 \$36 \$36 \$36	Nobles Mfg. Co dis 15.5 Bradley s dis 25.5 Adiostable Handle dis 15.5 Mitherby Tool Co dis 00.50 Drills and Drill Stocks	Claw H 198 % dog 7 % 8 80 4 98	Sails	Ship-Providence Tool Co. Screw Drivers. Hart, Bliven & Mead Douglass Mfg. Co
Beatty's	Briss and Drill Stocks-	M. H. Jones & Co	Oak um. # b 10c Best. # b 8%c U. S. Navy. # b 8%c Nay. # b 7%c OHers. # b 7%c Willers Zinc. Brass and Copper. dbs 45 c	Stanley Rule & Level Co.,
\$25.25 \$25.25 \$31.25 \$35.25 \$45.25 \$45.20 \$54.00 Butte. Wrought Brass	" Musery Falls each \$290 day 95 \$	Lathing, 123, \$\psi \ \text{dox} \ \ \text{10} \ \text		Screws.
COM MON CAST, FOT DRILLED.	Batchet, Merrill's	Shingling, Nos. 1 2 3	Broughton's dis 254:10	mrass and priver Capped, Li
Broad dis section of the section of	Weston W	All pol. Sirging 125w dog 535 5 50 5 75 Solid Steel Lath 128w dog 725 750 775 Hay Knives Lightning	Round Gilt F gross \$6 00 net	Brass and Silver Capped, L. Lag or Common Coach, Net Coach. Pstent Gimlet Point Bed. Japanned, List of Plain Ser Machine—Fiat Head, Iron, Brass,
Loose Pin	Drill Chucks. cach \$3-00, dis 30 5	# tages. Gate, Western	Faber's Carpenters'	Machine—Fiat Head, Iron, 1 Brass, Round Head, Iro Bra

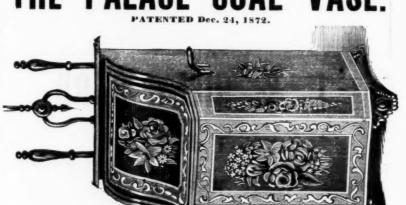
November 30, 1876.	
Nettlefold's Brass	Wringers.
Netteriot 8 Brass	Wringers. Universal, without Cog Wheels. 54-00 with 66-00 Rureks, without 69-00 Novelty, 64-00 With 66-00 Novelty, 66-00 Sherman, 66-00 Sherman, 68-00 Excelsior Bench Wringers. 88-00 Excelsior Bench Wringers. 22-00
Hand Rail, Sargent's	Nevelty, " 54 00
German Grain & doz 12 00 dis \$1:50	r for Set Tubs
Blood's Excelsior and Granger # doz 11 00 dis \$1:50 Young America	Stamped Tip Ware.
Wadsworth's Grass. dis 30 % Bush dis 30 %	Stamped Tin Ware. dis 10
Shears and Scissors dis 75&10 \$	I managed I in Water.
Blood & German Steel, Grass \$\pi\$ dox \$11.00 \$\pi\$ \$\pi\$ \$\pi\$ dox \$12.00 \$\pi\$ \$\pi\$ \$\pi\$ dox \$12.00 \$\pi\$ \$\pi\$ dox \$12.00 \$\pi\$ \$\pi\$ dox \$12.00 \$\pi\$ \$\pi\$ \$\pi\$ dox \$12.00 \$\pi\$ \$\pi\$ \$\pi\$ dox \$12.00 \$\pi\$ \$\pi\$	METALS.
Barnard's Lamp Trimmers	IMON.—DUTY Bars, I to 1% cents per lb Sheet, Band, Hoop and Scroll, 1% to 1% cents per lb. Provided, that
R. & E. Hst	IMON.—DUTT Bars, 1to 1½ cents per lb. Sheet, Band, Hoop and Scroil, t½ to 1½ cents per lb. Provided, that none of the above Iron shall pay a less rate of duty than 35 per cent. Plg, 37 per ton: Polished Sheets, 3 cents per lb.; Wrought Scrap, 38 per ton: Cast Scrap, 35 per ton. Railroad, 70 cents per 100 lbs. Boiler and Plate. 1½ cents per lb.
Sheavels and Spades	Plate 1% cents per 100 lbs. Boller and Plate 1% cents per 100 lbs. Boller and Plate 1% cents per lb.
Shovels and Spades. Amee Kowiand's dis 25 9	Foundry No. 2
Shaw Comment Shaw	SCOTCH.
Shove s and Tongs. Iron and Brass Head,	Contness
States. Square Frames, Round Cornered, by case	Am Patrod at mill Dute a note
Spokes, -North Carolina Hand:e Co. dis 20 %	from, at mili
From	≪erap. Wrought Serap, from yard " 25 50 @ 26 00
Spokes, - North Carolina Hand; e Co	Bar Iron from Store.
Ives'No. 1. \$15'00; No. 2. \$12'00 @ doz, dis 2356 & lo % Douglass'per doz \$9'00 dis 20&10 % Spoons.	% to \$ in. round and square to 6 in. x % to 1 in
Species	\$ to 2 in "round and square}
## Boardman's. new list	wedish fron.
Derby Silver Co. dis 40&5 5	Plow stze
German Silver	Common R. G. American, American.
Reëd & Barton dis 408.5 ± Derby Silver t.O. dis 408.5 ± Holmes, Booth & Haydens dis 408.5 ± Nickel Silver Co. dis 30.5 ± German Silver dis 30.8 ± Tin (P. S. & W.) \$150 ⊕ gross, net Tables 275 net Tin (Cowles Hdw. Co.) dis 10 ± Casaloids dis 20 ±	Common R. G.
Stencil Combinations	28
Stocks and Dies	25 to 36 * 9%c 8 c 8 c 8 c
" Axe Stone	Patent Platished
No.	delgian. "Uc One piece Corrugated Sheet Iron Elbows. OHAROOAL IRON,
** Slips	\$ 5 5\ 6 7 Inch. 2:50 8:50 4:50 5:25 6:50 per doz.
Joseph Dixon's P gross, \$6.00 dis 5 % Gem P gross \$4.50 dis 5 %	434 5 534 6 7 incl., 4500 7 up. doz.
Rising Sun	COPPER -DOIY. Plg. Bar and ingot, 5c.; old copper, 4 cents # &; Matufactured (including all articles of which copper is a component of chief value) 45 % ad
Iron	American Ingot
Section Sect	BRAZIER COPPER, Ordinary cizes, over 16 oz., per
Winterbottom's Try and Mitre. dis 202410 g Tacks, Brads, &c.—List of January 1, 1876.	Braziera Copper, ordinary sizes, 16 oz. and over 12 oz., per square foot. 34c. "Hraziera Copper, 12 oz., per square foot. 34c. "Hraziera Copper, 12 oz. per square foot. 36c. "Circles less ham 81 inch in diameter. 35c
Full Sweden dis 50k	Circles less than 84 inch in diameter
Carpet, Am. and Swedes dis 10& for cash Leather Head dis 10& Copper.	Locomotive Fire Box Sheets
Brads. Half Weightdis 50ec Shoe Nails— 4-8ths and longer, 9c.; 3½-8ths, 9½c. & 7b, dis 10 %	Circies, 84 Inch diameter and over 38c. " segment and Pattern Sheets 35c. " Locomotive Fire Box Sheets 32c. " sheathing Copper, over 12 oz. per sq. ft 31c. " Poit Copper 12 oz. # sq. ft. and ughter 38c. " Copper Bottoms 38c. " No Copper is Sheathing except 14248 nehes, and no to axreed 36 oz. Oz. # sq. ft. and sighter 38c. " Sheathing Copper, tinned on one side, by the Sheathing Copper, tinned on one side, by the
Since Nails— 4-8ths and longer, 9c.; 3½-8ths, 9½c. L B, dis 10 % Trunk, Clout and Finishing Nails— ½ 5 3 1 1½ in. and over. 2 5 5 17 15 18 11c. \(\psi \) B, dis 10 \(\psi \) Double Fointed Tecks	Sheathing Copper, tinned on one side, by the case
Tap Borers. dis 20&10 < Very Tap Borers dis 10&10 < Very Tap Borers dis 10&10 < 25 < Very Tap Borers dis 10&10 < Very Tap Borers dis 20&10 < Very Tap Borer	case 6c. ¥ sheet For less than a case 8c. ¥ sheet Tinning Sheets, ordinary sizes 8c. ¥ sheet Tinning Sheets, ordinary sizes 9c. ₹ sq. ft For tinning both sides double the above amount.
Top	O'NEILL'S PATENT PLANISHED COPPER. 14 and 16 oz. and heavier
American Tea Tray Codis 15 %	20 as, and lighter
Thermometers. The Calks. The Calks. Winsted # 5 15c., die 20 %	(And all sizes not over 20 inches wide.) 30x60 14 and 16 oz. and heavier
Winsted P 5 13c., die 20 5 Tobacco Cutters. Enterprise Mfg. Co. (Champion)	12 oz
Tobacco Cutters	Brown & Sharp's Gauge the Standard except for Fine Wire. BRASS MANUFACTURERS' PRICE LIST.
D A W	October 97th 1475
Traps	quantities of the pounds and over at one time. For less than 100 pounds, three cents additional.
Mouse, Wood Choker	All Nos. to No. 28, and widths 14 in. and under
Bound, Wire. W doz \$1 50 to 2 00 net Square, W doz 2 00 to 2 50 net Cage: W doz 2 00 to 2 50 net	Over 40 in. to 30 in., inclusive
Patent Self Settingper doz holes 2c net Catch-car-alive	Ali Brass thinner than No. 38 is Platers' Brass. at45c Sheets 24x48 in. and all sheets cut to particular sizes and lengths
Lothrop's Brick and Plastering dls 10 5 Dission's Brick and Plastering dis 15 5 Peace's Pinatering dis 20 c	Sheets wider than 30 in and under 40 in
Trew ets. Color	Sheets 24x8 in. and all sheets cut to particular sizes and lengths.
Garden dis 25 g Triers. Butter and Cheese. dis 25 g	LOW BRASS. Four cents % 5 more than High Brass.
Triera. Butter and Cheese. dis 25 s Ventilators (Window). Nickel and Gilt. per dozen \$1600 @ 1800 Vises.	Gilding Metal 7c, W B more than High Brass.
Wilson's) Planed or Polished
Paraliel, Parker's dis 20 5 Wilson's dis 30£10 5 Sargent's dis 50£10 5	Metal, in width 2 in. to 1/4 in. to No. 30, inclusive, ic. per m. advance. Metal, in width 2 in. to 1 in., thinner than No. 30, 2c. per m. advance.
Treaton	Metal, in width 1 in. to 14 thinner than No. 30, 3c. per B. advance. Metal, in width 14 n. to 14, to No. 30, 2c. per B. ad-
Vises	vance. Metal, in width ¼ in. to ¼ thinner than No. 30, 5c. per B. advance.
Faw Filers, Bonney'sper doz \$30 00 dis 25 \$	GERMAN SILVER MARKET METAL AND WIRE
Wheel Barrows. Canal (Pugsley & Chapman)	4 per cent., 12 in., to No. 26
Jacob's Pat. Self-Oiling R. R. and Canal	4 per cent., 12 in., to No. 26
Brase and Copper	more than 16 Bs., \$2 per B., net.
Coppered	Advance 2c. for each additional in., in width above 12 in., and 2c. per b. on each No. thinner than Nos. 3c to 3c inclusive. All German Silver thinner than No. 3c is Platers' at the per se additional
Honkina per dos \$1750 dis 10 \$25 \$	An German Silver tuniner than No. 30 is Flaters' at 50c. per B. additional. German Silver Scrap one-third less than net price of 12 in. Market Metal. German Silver Turnings, Filings and Chips, half the price of Scrap.
Tinned, Nos. 0 to 18	BHASS AND COPPER WIRE. Gild g and
# Grape, "10 to 14	Nos. 0 to 20
Stune Steel Wire. \$7 W to £ gold Japanned Barb Fence. \$7 W to £ gold Galvanized \$7 B 15c	Brass Rods, No. 5 and larger 0.36 0.40 0.46 Wire straightened and cut, smaller than No. 8
Steel Music Wire, Nos. 12 to 27. # B 180 Judd's Picture Wire. dis 50 % Clothes Line Wire. per coil 50c. nos	Spring Wire, 2 cts. per lb. advance.
Wrenches, American Adjustable	Fine wise, by the old english fine wise gauge. Gild'g and High Brass. Low Brass. Cop'r.
Clothes Iane Wire. per coil 50c, net Wrenches. dis 45 5 Baxter's Adjustable. dis 45 5 Baxter's Adjustable 95 New List, May 1, 76 dis 20 5 10 10 10 10 10 10 10 10 10 10 10 10 10	No. 26
" (Malleable) dis 50&10 % Diamond Hardware Co. dis 40 % Hull & Beldon's "Climsx"	No. 30
Collins & Co. 3 Coes' Genuine	Fine wire, by the old english fine wire gaues. Gild's and High Brass. Low Brass. Copyr. No. 25
Bernis & Call's Patent Combination. dis 20&5 \$ "Merrick's Patern. dis 25&2 \$ Rrigg's Patent. dis 20&5 \$	No. 36. 0-78 0-82 1-15 No. 37. 0-96 0-98 1-28 No. 38. 1-28 1-36 1-36 Ten cents per pound extra for Spooling.
	ren cents per pound extra for Spooling.

_	HE IRON AGI	
00 00 00 00 00	Plain to No. 20 inclusive, above 1/2 in. to 3 in	
00 00 00 00 00 00 00	Numer Above No. 26, special rates. Plata % is ch	
****	Fancy Tubing to No. 20. 48c English, Scotch and Extra Patterns Fancy Tubing to No. 20. 53c	
~	Taking sawd or Cut 2 to 4 feet long, 2 cents additional cutting and 2 cents 4c cent for each additional cutting under two feet. All Mandred Drawn Tubes under % in., 25 cents per pound advance. ZING TUBING. Plain	
d, at ty	Fancy	
00 00 00	1	
10 50	Common Plain Brass Pail Ears	
e. 00	High Brass Scrap, 16 cents. Low "ents. Gilding, 30 cents. Turnings, Fillings and Chips, half the price of Scrap. Orders for Goods on this list received on or after this date, will be filled at the rate hereit stated, Terns—Net cash. No discount allowed. Interest to be added after thirty days.	
00	LEAD-DUTY: Pig #3 per 100 lbs.; old Lend, 1% cent	
le le le le	Per 10 ; Fipe and Sheet, 28 Cents Per 10 See 6 % c 6 % c gold	
ic 50	N.P.U W D 54 @ 9c	1
1.	A., 30:; B, 30:; C, 130:: IN. 130: Va. ATTERIDUTY: Bars, Ingots, Sheets and Colls, valued at 7 cents perlb., or under, 2½ cents; over 7 cents, and not above 11, 3 cents per lb. over 11, 3½ cents per lb. and 10% ad val. Rallway Bars 1½ cents per lb. Rallway Bars, in part Steel, I cent per lb. Provided, that Metal cemented, cast or made from Iron by the Bessemer or pneuma 'process, of wbatever form or de scription, shall b classed as	
00000	Tool	
le le	Sheet	
ε,	Tool. ** B 20 @ 21c Tool, extra fine '40 @ 75c Spring ** B 12c and upward Machinery ** B 21	
Z.	Regitan Steel payable in gold, net.	1
C	Round Machinery, Usat W B 10% (9 11% C 1	
	Best Cast	
4	File Steel, Flax and 3 Hound. 12%C Square and Bound. 113%C Mill. 18%C Taper to 4 Inch. 186C Taper 3 and 3% inch. 18 18C	
it it	SPELTER—UTT: In Pigs, Bars and Plates, \$1.50 per 100 lbs. Silicatan, cash	н
	Straits. # B 28c., currency Straits. # B 21c., currency English # B 21c., currency TIN PLATES, CURRENCY PRICES.	
	C 10714 22312 Prime Charcoal	
e	D X 12/x17 " 10°25 @ 10°50 For each addit1 al X add	
r	C 10x14	
ccc	1 C 29x23 556 1450 \$15:00 13:00 \$14:00 1 X 2 x225 30:00 C 29x29 21:25 1 C 14x20 M F. Brand \$8:50	
00000	ZINC. DUTY: Pig or Block, \$1 50 per 100 lbs. Sheet 2hc, F b. Baset cask \$\frac{1}{2}\$ cask \$\frac{1}{2}\$ cope 9c	
cec	Paper Stock, Old Metals, & c. (Dealers' Selling Price.)	
2000	Canvas linen	
.	Kentucky bagging	-
	Oakum junk, No. 1. 5½ 65% No. 2. 6 4 Grass rope. 3% Tarred Shaking. 2 White Count Cuttings, all paper. 7	
	White Shavings, No. 2	-
	Book Stock, Mixed 1 1 1 1 1 1 1 1 1	
	Copper	
	Heavy Composition	
	Stove plate	

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Dryer, Patent, Am'n ass't cans, 10 4c.; kegs, 9
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39 x 5 to 34 x 6. 17 25 15 52 15 50 34 x 58 to 34 x 60. 18 2 17 25 15 50 36 x 9 to 40 x 60. 30 75 18 25 17 25
36 x 90 to 40 x 60
SIZES. Int. 2d. 3d. sth
C 11 X 14 to 16 X 24 7 13.75 12.50 11.75 10.5
1 10 X 3 10 24 X 30 1975 17:25 14:50
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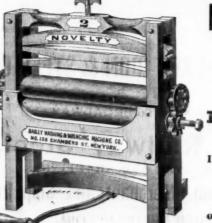
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Other makes	H
Mann s (according to weights). Per dos. \$10 50 @ 9 50	8
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Augers and Auger Bits	18
Connecticut Valley Auger 1818 dis 40&10 % Coox s Bits	200
Dougless' & Ives' Augers	7
Balances.— Light or "Common"	7
Gormon (Tissue Paner Weight) die 70 4	
Conneil's Door Beris. dis 50&5 @ 50&10 g Gt. Western & Kentucky Cow. dis 60 \$	
Bering Machines,—Bates Mfg. Co., complete with augers	1
Western Phitadelphia (Eagle) dis 75 % Western (Hard) (Gagle) dis 60&10 % (Coleman's) dis 60&10 %	
Reaces.—Barber 8	
Rackus	1
Cast Fast Loose Joint	1
Narrow	
Clark's Case 70%. Shepard Lult & Porter's (Phila.) Hingesdis 65%, case, 60&5%	100
Shenard Luli & Porter's (Phila.) Hinges dis 5 % , case, 60&5 % Garretson's No. 0 Hinges dis 30 & 20 & 10 & 20 & 2	
Unatus.—German Haster and Coll	
Chingle	
Beats Framing and Firmer. dis 29	
Porcelain Wheel Clark Control of the	0
Porcelain, wheel of the work o	
Patent Box and Sidedis 20 (Cutlery	5
Brawling Knives.—Hart Mig. Co. s	2
Par Done.	- 1
Thread	6
Nichoison Mill Files	
Nicholson Mill Files	000
Fluting Machines. # 5 gold 4 75 % 4 5 # 5 # 5 # 6 # 7	t
Imperial -4 \(\) in. roll	1 1
Hamberts	W 15/ 20
Beatty's	200
Shinging and Half. (No	80
Claw No	- 1
Hinges. Strap and T	10 22 23 23
Putnam	28
H nobs. Door Mortise and Rim, Min- New list; Discount 35 oral and Porcelain	
Till and (unboard	3 [
American Padlocks. dis 35 @ 3556. Scandinavian Padlocks. dis 36 @ 356. Scandinavian Padlocks. dis 36 @ 356. Scandinavian Padlocks. dis 36 @ 356. Foot. 59 % 60 % 61 % 61 % 64 % 65 % 65 % 65 % 65 % 65 % 65 % 65	
Trank Locks	XXX
Tubular Lanterus	N N N N
Mattocks.—Long and Short Cutter	XX
Pennsylvania Pattern Beinasce Gate. Enterprise Mig. Co. a Measuring Faucets. dis 20 Stebbuns Gates dis 20 dis 20 Stebbuns Gates dis 20 dis 2	M 14 14 14
Ment Cutters, - Dixon'sdia 25	4
Woodruff	
	**
Adjustable	18
Piane Irons.—American. list in Butcher's	et
Rulesdis 60&10	18
Wood Head Iron Teeth	14
English Pattern	1%
9) dos\$14°50 17°75 2f°00 ' 26°50 81°00 25 No 50 100 159 290 250 80	50
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Sharpened. Clipper No. & Painted Red, Boxed and Sharpened. Sharpened. Cast Steel Soythes \$750 @ 67	00
Canares. Steel and Iron, new list	

	T	I
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	Sa ws.—Disaton's Cross Cut, No. 1	of I
-	Boynton Champton	lro
	Boyleon Diffect week (no. 1 and Spades). How vis and Spades. How land's Plain Hack	Me Fla Iro
	Extra discount on above for 10 days' cash, 5 %. Oliver Ames & Sons. dis 25 %	No
	Richmond (polished face) by the cask 3	Bed Fer
	Wasnita Extra	Car
	Extra discount on above for 19 days' cash, 5 %. Gilver Ames & Sons, (poished face) dis 25 % Sad I rous, -Richmond (poished face) per 10, 3% c Richmond (poished laze) by the cask 3 % Stone, - Arkansas Oll, No. 1.	Sto Ele Ma
)	United States and others in Combination dis 52% % Keystone, not in Combination	Bo
0	Specials	Nu
	Lalance & Grosiean 1720 dis 918 dis 95 Springs,—Gray's Door	Sta Iro
6	Stocks and Dies. dis 1045 % Stove Polish.—Gem. 19 gross, \$5.00	Pa
5 3	### ### ### ### ######################	7 6
6 6	Trunk, Clout and Finishing Nails	Sti
E M	Trunk, Clout and Finishing Nails	Ser Br
	Traps.—Genuine Oneida—Newhouse listdis 20625 g Im. Oneida—Newhouse list (1st qual.)dis 40 @ 4065 g Visca.—Solid Box. currency	1
5 5 5	Wrenches.—Coes Genuine	Br W Ca
2 2	Tafts Pattern (Wrought Bardis 52-0 9 Philadelphia Tor Cought Bardis 70 @ 70&10 6	Ca Dt
8 8 5	1 Improved Baxter dis 25 4 Adjustable Fork dis 25 4	St
MA IN CI	Wire.—No. 0 to 18. (Advanced April 24th)dis 50 g. No. 19 to 26	SI
200	Tinned Broom Wire	No.
* * *	BUFFALO.	25
* * *	Reported by Messra, Sidney Shepard & Co.	P
	Augers—Snell Mfg. Co	W
***	Phoenix Gis 40 g Bells, Cow—1 aw s Genuine Gis 55 g Braces—Bit, Spofford's Patent Gis 55 g	W
**	Augers—Snell Mfg. Co. dis 25&10 \(\) Axes—Francis. \(\) \(N
% ie	Brick - Bath (box of 2 doz) Best English 41 % Can Openers - Sprague's dis 50&10 % dis 50	W
K	Chisela-Firmer Socket	
× 5.5	Castings—Malicable	
id	Cocks-Globe and Blbb.	
n. On	Elbows-Corrugated	Se Er
ANN	Files—Maischoss Bros	M
* *	Hammers—Henry W. Kip's	S
MAN	Shepard s and Standarddis 60% 10 % 10 % 10 % 10 % 10 % 10 % 10 %	
00 00 00	Fancy and Helmet dis 15 %	V
14	Copper. "Hand Made"	8
1 %	Razor Blade	L
on os	Machines—Apple Paring	PSS
3	Mins, Coffee—Box and Sines, common	
9 00 8	Horse, Ausable 30 27 25 24 25 290	F
5 % 100 8	Paint—White Lead, U. S. Gov't. #5 5 1 Pans—Dripping #5 5 8	
ist	Flat Head, Irondis 52%	
50 50	Sieves—Wood, Hoop iron. #137 Tinned #165	
et	Skates and Straps—White's. dis 39 3 Spoons, iron Tinued. dis 10 1	N
et	S. S. & Co., Kitchen	1
et	Britannia	
o g	Fairbanks	0 1
5 %	Palace Paross, \$350; bulk, per b. 50; bulk, per b. 50; squeezers—Lemon, Porcelain. P doz., \$544	
5 5	Tea Traysdis. 15 5	13

1	Brass. Sheets	8.1
1	Brass Sheets Brass Bra	Nec
I	Brick-Bath (box of 2 doz) Best English \$1.25	Wa
1	Can Openers—Sprague's	15
ı	Chisels—Firmer Socket	16
1	Framing Socketdis 70 \$	13
1	Corner Socket Chisels	10
1	Castings-Malicable P D 9c	12
1	Cottors Most "Halos"	16
1	Egg Beaters—" Dover" per doz \$4:00	18
. 1	Elbows-Corrugated	5e
1	Columbus	- 11
	Files—Maischoss Bros	In
1	Freezers, Ice Cream—" Champion"	Ws
	Hammers—Henry W. Kip's,dis 10&5 \$	Sin
: 1	Hinges-Window Blind-	W
Н	Shepard s and Standard	
6	Funnel, Black and Galvanized "dis 15 %	Wi
9	Fancy and Helmet " dis 15 %	
il	Kettles-Brans * * 45c	Wi
	Copper. " Hand Made"86c.	
Ы	Knives, Drawing—Oval No. 1	Sta
	Razor Bladedis 60&10 \$	Do
	Without guard 11:00 dis 15 \$	Po
1	Machines-Apple Paring	Sir
5	Milis, Coffee—Box and Side, common, dis 25 \$ 1	St
5	Hoos. Coal—Plain, Black and Galvaniednew list dis 15 % Fanney and Helmet.	I
	Horse AusableNo. 5 7 8 9 10	Fo
8 0	30 27 25 24 25 22c	1
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6	Paint-White Lead, U. S. Gov't # B 8%c	-
	Frying	A
	Rivets—Iron. Black and Tinned	
	Flat Head, Irondis 52% \$	8
0	Flat Head, Brassdis 52% \$ Steves—Wood, Hoop 1700	Ple
0	Tinned	
"	Skates and Straps—White's	W
3	Spoons, iron Tinneddis 10 \$	Ne
t	8. S. & Co., Kitchen20&19 \$	KI
1	Plated Rogers' A No. 1	W
1	G. S. Hall, Elton & Codis 30 4	W
t	Fairbanksdis 25 %	
8	Stove Polish—Gem @ gross; \$4:50	W
16	Palace	**
	Squeeezrs—Lemon, Porceinin	
% 10	Tea Traysdis. 15 %	W
_	Tools—Tinmens'dis 30, 102 10 %	
S. Wi	Vases-Palace Coaldis 15 %	De
	Parailel. Buffaiodis 30 5	TO
	Ware—French, Tinned and Irondis 20&10 %	To
8	Cast Iron Hollowdis 45 %	W
10	Visca- Parallel, tiuffalo dis 30 5 Ware - French, Tinnec and Iron. dis 30 5 Ware - French, Tinnec and Iron. dis 30 5 Ware - French, Tinnec and Iron. dis 30 5 Cast Iron Hollow dis 45 5 Cast Iron Hollow dis 45 5 Cast Iron Hollow dis 45 5 Wingers - Royelty distance	1
13	Wringers-Noverty	
23	10x14. 10. Charcoat \$8°25 14x20 0. terne	no
10	12x12. " 8 25 30x28 C. " 16 00	
18	14x20. 44 8251	
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	Pla Tin-Straits 22c @ 224c	
9	12x12	
	Bar Tin 23c Salder-No. 1, Crook's 15c No. 1 Star 13c	
5	Bar Tin. 390	
-	Bar Tin. 390	
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\$\pi\$ 10. \$\pi\$ 10.

cle Tree, froued complete, from all except Malleable Ferrule....each, 650 gle Tree, fron complete, from all finproved End Pleces riveted on; acts as a wear fron for wheel to rub

rdering Box Strap Bolts please give diameter at rew End.
on Box Rods, narrow track, each.
wide track, each.
de Tree Irons, \$\Pi\$ set of four pieces.
ught Iron Boister Piates, \$2\forall \text{in. wide, }\Pi\$ set.

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/agon Brake Ratcheta, each. 3/2

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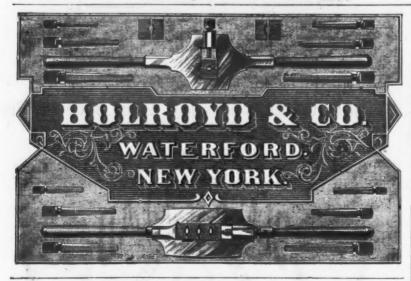
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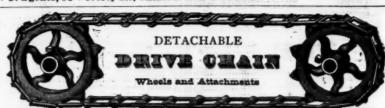
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In this Strap the liability of the leather to stretch and become loose and porous is prevented by the use of a patented non-extensible base, which supports the seather and secures

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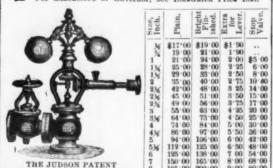
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It is a common method to advertise Governors without cost, unless satisfactory to the customer, and then charge High Prices for doing what any 100d Governor will do. Various Governors inferior to the "Judson' are sold m this way, operating well enough for three months, to insure collection of the pay, but becoming useless after a year's wear—their construction lacking durability. The Judson Governor is guaranteed to be not only the best Regulator of Steam Engines, but also the most durable Governor made. Parties in buying other Governors should stipulate that their durability be guaranteed, and should also take care that they do not, for much inferior Governors, pay higher prices than those shown in the accompanying list. We guarantee the Judson Governor will do all any other Governor will do all any other Governor will do all any other Governor and o, and in Accuracy and Durability—the main essentials—we guarantee it shall do more.

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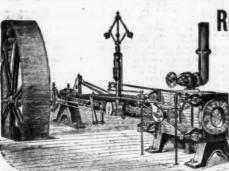
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meets just such a want; the apparatus is light and can be easily handled, yet it is of sufficient strength for the purpose required. It can be placed upon the shears of the lathe, and moved along the entire length of the work. It is especially Adapted to Removing Short Bends.

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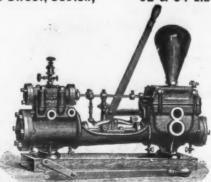
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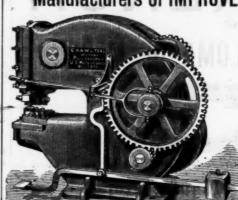
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ant every part of this Machine to stand the shock of the wheel running at 195 revolutions.

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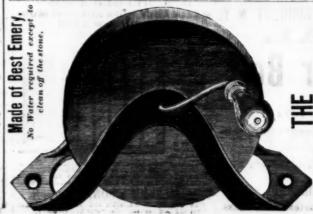
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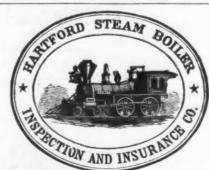
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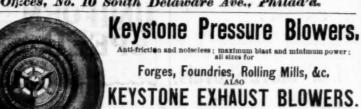
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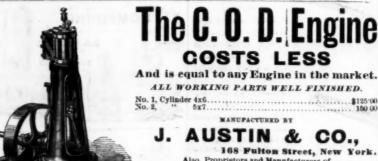
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REPORT OF JUDGES

In Department V, Group 3, at the 44th Exhibition of the

AMERICAN INSTITUTE. Held in the City of New York, Oct., 1875

No. 318, Drawing, Drop & Punching Presses.

THE STILES & PARKER PRESS CO., Of Middletown, Conn.

The machinery exhibited by these makers is of a character that calls for special commendation. In addition to their well known punching presses, to which a new feature has been added in a press adjustable to an inclination for discharging work left above the die, there are exhibited by them a combined punch and shears, a drawing or blanking press, and a drop.

bined punch and shears, a drawing or blanking press, and a drop.

In all these there is shown the highest in schanical culture, applied to meet every practical requirement, to avoid every practical difficulty, and to enlarge the range of application of the machines, by desices which are at once simple, elegant, and effective.

Your committee would inhesitatingly recommend for this exhibition the "Medal of Progress," but find such award debarred by the rule of the Institute, forbidding such award unless a Silver Medal, has been previously awarded. We, therefore, respectfully recommend the award of a Silver Medal.

Silver Medal Awarded.

A true copy from the Report on file.

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Construction & Efficiency. An absolutely Durable, Cheap, Efficient and Ecoomical Steam Pump. Requires no special care or ubricating. Warranted. Address for circular,

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BRASS TURNINGS AND OLD
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bellow is a sways cool. To convince yourselves of the above facts, send for sample.

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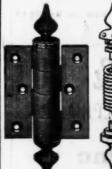
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